National Institute for Health and Care Excellence

Draft for consultation

Maternal and child nutrition

[O] Evidence reviews for interventions to promote healthy eating and drinking practices, including complementary feeding, in children from 12 months to 5 years

NICE guideline number tbc

Evidence reviews underpinning recommendations 1.5.11 to 1.5.13 and research recommendations in the NICE guideline

July 2024

Draft for consultation

This evidence review was developed by NICE

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Interventions to promote healthy eating and drinking practices, including complementary feeding, in children from 12 months to 5 years

Review question

What interventions are effective to promote healthy eating and drinking practices, including complementary feeding, for children from 12 months to 5 years (in line with government advice)?

Introduction

It is recommended that from 12 months of age children should be offered a wide range of healthy family foods prepared in an age-appropriate form and offered three meals and two snacks per day. Highly processed and sweet foods and drinks, and energy dense snacks should be avoided. By one year of age solid food should provide the majority of energy and nutrients, though breastmilk will still provide some energy, nutrients and protection from infection for as long as they are breastfed. Formula milks and bottle feeding are not recommended after 1 year of age. The main drinks to offer other than breastmilk should be limited to water and unmodified cow's milk. However, many young children are given foods and drinks that are not appropriate for them, or they are given too much or too little healthy foods. The aim of this review is to find out what interventions are effective in promoting healthy eating and drinking practices, including complementary feeding, for children from 12 months to 5 years.

Summary of the protocol

See

Table 1 for a summary of the Population, Intervention, Comparison and Outcome (PICO) characteristics of this review.

Table 1: Summary of the protocol (PICO table)

Population	Children from 12 months to 5 years and their parents, carers, or early years professionals Exclusion: Children following a specific diet for a medical condition
Intervention	Interventions with a main aim to promote heathy eating and drinking practices in the population of interest. Interventions will be organised according to the following groups: • **intervention group 1:** interventions using information provision and/or education to enhance healthy eating and drinking practices • **intervention group 2:** behavioural interventions (for example, role modelling or interventions using praise and rewards) • **intervention group 3:** interventions aimed at improving access to heathy foods and drinks (that is, provision of healthy food/drink, welfare schemes designed to enable access to healthy food/drink) • **intervention group 4:** multicomponent interventions (interventions that combine more than 1 intervention listed above). The committee anticipated that, along with the intervention, studies would report at least 1 domain for each of the components noted below. Sensitivity analyses will be done according to these if enough data is available. • **Component 1:** mode of delivery • **Component 2:** intervention aimed at individuals or groups • **Component 3:** individualised /tailored interventions or general • **Component 4:** who delivers the intervention • **Component 5:** where is the intervention delivered • **Component 6:** behaviour change models, techniques and theories
Comparison	• Another intervention • Status quo/treatment as usual (as defined by study authors, includes no treatment) • Time (before and after)
Outcome	**Critical:** • appropriate milk feeding (continued breastfeeding and avoidance of formula from age 1) • beverage intake (sugar sweetened and any other beverages except milk and water) • food and nutrient intake patterns, including fruits and vegetables and scores from validated scales, such as the Dietary Diversity Score (DSS) and Healthy Eating Index (HEI), diet quality indices (DQI) and Healthy Dietary Habits Index (HDHI) • babies or children's growth (length or BMI) • dental health. **Important:** • use of cups and bottles • changes in attitude, confidence and knowledge as part of parent/carer's intention to change behaviour.

BMI: Body mass index; DSS: dietary diversity score; DQI; diet quality indices; HDHI: healthy dietary habits index; HEI: healthy eating index

For further details see the review protocol in appendix A.

Methods and process

This evidence review was developed using the methods and process described in Developing NICE guidelines: the manual. Methods specific to this review question are described in the review protocol in appendix A and the methods document (supplementary document 1).

Declarations of interest were recorded according to NICE's conflicts of interest policy.

Effectiveness evidence

Included studies

This review includes 1 Cochrane review (Hodder 2020) with 34 randomised controlled trials (RCTs) or cluster RCTs relevant to this review (reported in 38 publications, Blissett 2016, Cooke 2011, Cravener 2015, Daniels 2014, Daniels 2015, De Coen 2012, Duncanson 2013, Farrow 2019, Fildes 2014, Haire-Joshu 2008, Heath 2014, Hong 2018, Keller 2012, Kim 2018, Kobel 2019, Kristiansen 2019, Lee 2015, Magarey 2016, Namenek Brouwer 2013, Nekitsing 2019, Nicklas 2017, O'Connell 2012, Owen 2018, Remington 2012, Roset-Salla 2016, Scheiwe 2010, Skouteris 2015, Smith 2017, Staiano 2016, Tabak 2012, Verbestel 2014, Vereecken 2009, Wardle 2003, Watt 2009, Wolfenden 2014, Wyse 2012, Zeinstra 2017, Zeinstra 2018) and 10 RCTs or cluster RCTs identified in our search outside of the date range of the Cochrane review (Braga-Pontes 2022, Gans 2022, Harris 2022, Leis 2020, Nix 2021, Smith 2020, Toussaint 2021, Vepsalainen 2022, Vlasblom 2020, Wen 2022).

The included studies are summarised in Table 2 and Appendix L.

Hodder 2020 included a total of 80 trials published between 1994 and 2019 and included educational, health promotion and/or psychological or family or behavioural therapy or counselling or management or structural or policy or legislative reform interventions, designed to increase consumption of fruit or vegetables or both in children aged five years and under. Studies with a focus on obesity prevention with a primary outcome of intake of fruits and vegetables were included in Hodder 2020 but were excluded from this review as obesity prevention is outside the remit of this guideline. Other reasons for excluding studies which were included in Hodder 2020 from this review are detailed in the sections below.

Studies with children aged 12 months to 5 years were included in our review. The study population included in Hodder 2020 was children 5 years of age and under. Studies in children aged < 1 year from Hodder 2020 were not included as they did not meet protocol criteria.

The study population included in the RCTs identified in our search included infants recruited antenatally and up to 6 years of age and/or their parents or carers. Studies were only included if the children's mean age was between 1 year and <6 years. When mean age of children was not reported, the age of the included children needed to be between 1 year and <6 years to be included in this review.

There was evidence available for all the intervention groups in the protocol:

- 19 studies compared information provision intervention to status quo/treatment as usual (Daniels 2014, Daniels 2015, De Coen 2012, Haire-Joshu 2008, Heath 2014, Kobel 2019, Kristiansen 2019, Leis 2020, Magarey 2016, Nekitsing 2019, Nix 2021, Scheiwe 2010, Toussaint 2021, Vepsalainen 2022, Verbestel 2014, Vlasblom 2020, Wardle 2003, Watt 2009, Wen 2022)

- 8 studies compared information provision intervention to other information provision (Duncanson 2013, Gans 2022, Harris 2022, Hong 2018, Roset-Salla 2016, Tabak 2012, Wolfenden 2014, Wyse 2012)
- 3 studies compared behavioural interventions to status quo/treatment as usual (Cravener 2015, Staiano 2016, Zeinstra 2017)
- 1 study compared behavioural intervention to another behavioural intervention (Blissett 2016)
- 9 studies compared interventions aimed to improve access to healthy foods and drinks to status quo/treatment as usual (Cooke 2011, Farrow 2019, Kim 2018, Lee 2015, Nekitsing 2019, O'Connell 2012, Smith 2020, Wardle 2003, Zeinstra 2018)
- 2 studies compared multicomponent intervention involving healthy eating information provision and behavioural intervention to other information provision (Braga-Pontes 2022, Keller 2012)
- 3 studies compared multicomponent interventions using information provision and intervention aimed at improving access to healthy foods and drinks to status quo/treatment as usual (Nekitsing 2019, Owen 2018, Smith 2017)
- 4 studies compared multicomponent interventions using information provision, behavioural interventions and interventions aimed at improving access to healthy foods and drinks to status quo/treatment as usual (Namenek Brouwer 2013, Nicklas 2017, Skouteris 2015, Vereecken 2009)
- 2 studies compared multicomponent interventions using behavioural interventions and interventions aimed at improving access to foods and drinks to status quo/treatment as usual (Fildes 2014, Remington 2012).

Studies from Hodder 2020 with interventions that were not relevant to this review were excluded, these were interventions relating to energy density and portion sizes as they did not align with any of the intervention groups in the protocol.

Hodder 2020 reported the outcome children's fruit and/or vegetable intake assessed using a variety of measures including change in number of portions or serves, change in grams or change in biomedical markers such as α-carotene, β-carotene, cryptoxanthin, lycopene and lutein. Outcomes relating to fruit and vegetable juice intake were not considered as fruit or vegetable intake, except when they were reported as part of an aggregate measure of fruit or vegetable. Additional outcomes not reported in Hodder 2020 were included in the protocol for this review. Fourteen of the 38 publications included from Hodder 2020 provided data on these additional outcomes and were therefore included in the analysis of this review (Daniels 2014, Daniels 2015, De Coen 2012, Duncanson 2013, Haire-Joshu 2008, Kobel 2019, Magarey 2016, O'Connell 2012, Roset-Salla 2016, Scheiwe 2010, Verbestel 2014, Vereecken 2009, Watt 2009, Wolfenden 2014).

One study assessed outcome relating to appropriate milk feeding (Roset-Salla 2016), 13 studies assessed outcomes relating to beverage intake - sugar sweetened and any other beverages except milk and water (Daniels 2014, De Coen 2012, Duncanson 2013, Kobel 2019, Magarey 2016, Roset-Salla 2016, Scheiwe 2010, Skouteris 2015, Verbestel 2014, Vereecken 2009, Vlasblom 2020, Watt 2009, Wen 2022), 43 studies assessed outcomes relating to food and nutrient intake patterns, including fruit and vegetables intake and scores from validated scales (Braga-Pontes 2022, Blissett 2016, Cooke 2011, Cravener 2015, Daniels 2014, De Coen 2012, Duncanson 2013, Farrow 2019, Fildes 2014, Gans 2022, Haire-Joshu 2008, Heath 2014, Hong 2018b, Keller 2012, Kim 2018, Kobel 2019, Kristiansen 2019, Lee 2015, Leis 2020, Magarey 2016, Namenek Brouwer 2013, Nekitsing 2019, Nicklas 2017, Nix 2021, O'Connell 2012, Owen 2018, Remington 2012, Roset-Salla 2016, Skouteris 2015, Smith 2017, Smith 2020, Staiano 2016, Tabak 2012, Vepsalainen 2022, Verbestel 2014, Vereecken 2009, Wardle 2003, Watt 2009, Wen 2022, Wolfenden 2014, Wyse 2012, Zeinstra 2017, Zeinstra 2018), 8 studies assessed outcomes relating to babies or children's

growth (Daniels 2015, De Coen 2012, Kobel 2019, Toussaint 2021, Verbestel 2014, Vlasblom 2020, Watt 2009, Wen 2022), 1 study assessed outcome relating to dental health (Scheiwe 2010), 2 studies assessed outcomes relating to use of cups and bottles (Scheiwe 2010, Wen 2022) and 4 studies assessed outcomes relating to changes in attitudes, confidence and knowledge as part of parent/carer's intention to change behaviour (Harris 2022, Scheiwe 2010, Toussaint 2021, and Watt 2009).

Only studies conducted in high income countries are included in this review. Hodder 2020 included studies conducted in both high-income and low-and-middle income countries. Studies conducted in low-an-middle income countries were excluded from this review as they do not meet the protocol criteria. Studies in Hodder 2020 included in this review were conducted in USA, UK, Netherlands, Australia, Belgium, Germany, Korea, Turkey, Norway, Denmark, France, Spain and UK, Greece and Portugal. Other RCTs included in this review were conducted in Portugal, Australia, Belgium, USA, Germany, Canada, Spain, UK, Netherlands, Finland and Poland.

In studies reporting multiple follow-ups, the longest follow-up from the study was reported in the review. For all studies included in this review, follow-up ranged from immediately after the intervention to 4 years after intervention.

Sensitivity analysis as specified in the protocol were conducted only for comparisons with at least 2 studies.

The evidence was stratified according to level of socioeconomic deprivation as reported in individual studies. Studies which recruited participants from low socioeconomic neighbourhoods or from disadvantaged populations were stratified as low-socioeconomic deprived groups. Evidence could not be analysed according to pre-specified strata of parental education and parental age as there was insufficient information.

As per protocol, subgroup analysis was conducted when there was severe heterogeneity. One study included participants with autism spectrum disorder (Kim 2018) and sub analysis was conducted for this group. Subgroup analysis for other pre-specified sub-groups (geographical variation, religion and cultural considerations, babies or children with disabilities and other physical and mental health conditions and ethnicity) could not be conducted as there was no information within the studies to conduct the analysis.

See the literature search strategy in appendix B and study selection flow chart in appendix C.

Excluded studies

Studies not included in this review are listed, and reasons for their exclusion are provided in appendix J.

Summary of included studies

Summaries of the studies that were identified through our search and included in this review are presented in Table 2. Information about the studies in Hodder 2020 that were included in this review is available in appendix L.

Table 2: Summary of included studies.

Study	Population	Intervention	Comparison	Outcomes
Braga-Pontes 2022 Cluster RCT	N = 162	Digital games (DG) Intervention consisted of 5 mini-games with each having a vegetable	Education session Educational sessions with	• Vegetable intake at 6 months follow up

Study	Population	Intervention	Comparison	Outcomes
Portugal	Children aged 3 to 6 years attending public preschools Child's age, mean (SD)= 4.63 (0.977) years Caregivers age, mean (SD)= 36.76 (5.09) Caregivers educational level: Basic education 12.4% High school=31.5% University education= 42.6% Socioeconomic status Not reported	superhero (tomato, purple cabbage, cucumber, carrot and lettuce) and included tailored audio messages about the characteristics and health benefits of these vegetables. <u>Story book (SB)</u> Made up of 5 chapters each having a vegetable superhero, and it was clear in the story the characteristics and functions of the vegetables. <u>Story book and stickers (SBS)</u> Based on the story book with the addition of a reward (sticker) for children when they ate the vegetable.	the Portuguese Food Wheel Guide (PFWG)	
Gans 2022 Cluster RCT USA	Clusters, N = 119 Children, N = 423 Children aged 2 to 5 years attending the Family child care providers (FCCP) for at least 10 hours per week Child's age, years: 2-years old = 37% 3-years old = 30% 4-5 years old = 33% Parent/carer age Not reported FCCP education, %: Less than high school = 10.1% High school = 32.8% Some college = 38.7%	<u>Nutrition intervention</u> Included monthly support from a support coach, tailored materials including a tailored report, newsletters and videos and a set of active toys.	<u>Reading and literacy intervention</u> Included content related to reading readiness and early literacy skills rather than nutrition and physical activity	• Healthy Eating Index (HEI) at 8 months post-intervention

Study	Population	Intervention	Comparison	Outcomes
	Bachelor's or Master's Degree = 18.5% Socioeconomic status Not reported			
Harris 2022 RCT USA	N = 600 Caregivers with children aged 9-36 months Child's age, months: 8-12 months = 20.3% 13-24 months = 38.5% 25-37 months = 41.2% Caregiver's age Not reported Caregiver's educational level High school or less = 26.8% Some college or 2-year degree = 37.2% 4-year college degree = 22.5% Higher or professional degree= 13.3% Socioeconomic status Not reported	Counter-marketing videos 2 sugary drink counter-marketing videos presented information to counteract common misperceptions about children's fruit drinks and toddler milks in a positive and entertaining manner. The fruit drink video provided information about ingredients, including added sugar, fruit juice, and diet sweetener content. The toddler milk video defined the products and stated that they contain added sugar, cost 4 times more as plain milk, and their marketing claims are not supported by science.	Control videos 2 control videos contained information about limiting screen time and caregivers co-viewing screens with their child. Control videos were selected to match the sugary drink videos in tone, age of child, and production quality.	• Attitudes about fruit drinks measured immediately post-intervention • Attitudes about toddler milk measured immediately post-intervention • Intent to serve fruit drinks measured immediately post-intervention • Intent to serve toddler milk measured immediately post-intervention • Intent to cut back on fruit drinks measured immediately post-intervention • Intent to cut back on toddler milk measured immediately post-intervention
Hodder 2020 Systematic review Multiple countries (USA, UK, Netherlands, Australia,	N = 12,965 from 80 trials with 218 trial arms Child age, mean See Appendix L summary table Maternal age	• Child-feeding interventions • Parent interventions • Multicomponent interventions involving both child-feeding and parent interventions Any interventions designed to increase	Any alternative intervention to encourage fruit and vegetable consumption as described above, or a non-intervention control, usual care, or	• Fruit and/or vegetable intake measured between 0 to 42 months post intervention

Study	Population	Intervention	Comparison	Outcomes
Belgium, Germany, Korea, Turkey, Norway, Denmark, France, Spain and UK, Greece and Portugal)	See Appendix L summary table Parents education See Appendix L summary table Socioeconomic status See Appendix L summary table	consumption of fruit or vegetables or both in children aged five years and under (as defined in types of participants) including educational, experiential, health promotion and/or psychological or family or behavioural therapy or counselling or management or structural or policy or legislative reform interventions	attention control or wait-list control.	
Leis 2020 Cluster RCT Canada	Cluster, N = 61 Children, N=897 Licenced early childhood centres (ECCs) in Saskatchewan and New Brunswick, Canada Child age, mean (SD): Intervention= 4.1 (0.77) years Control= 4.1 (0.75) years Parental age: Not reported Parental education: Not reported Level of socioeconomic deprivation: Not reported	<u>Information provision including</u> • 3-hour on-site training to childcare educators, directors and cooks • Provision of resources including implementation, physical activity and healthy eating manuals and an active play equipment kit • Continuous online and phone support and monitoring. Monthly newsletters with tips on increasing movement and improving healthy eating. • 90-minute booster session halfway through the intervention which was tailored to the individual challenges faced by any ECCs.	<u>Usual practice</u> No provision of training, resources or support	• Fruit and vegetable intake at 6 to 8 months post-intervention
Nix 2021 RCT USA	N = 73 Families with a toddler 18-36 months old, enrolled in home-based Early Head Start with 1 of the study's 3	<u>Information provision using alternative material to Early Head Start program.</u> Involved active coaching where home visitors provided 3-6 ingredients and coached on structured food preparation activities	<u>Usual care</u> Early Head Start usual material which aimed to encourage parents to foster their toddlers' cognitive,	• Healthy eating habits at 1 week post-intervention

Study	Population	Intervention	Comparison	Outcomes
	community partners. Child's age, mean (SD)= 30.72 (6.96) years Maternal age: Not reported Maternal education, % Not graduated from high school = 29% Employment Full time employed= 11% Socioeconomic status: Not reported	which involved the toddler, didactic information to parents such as frequency of new food exposure before a toddler will eat it, and assisting parents to identify how new skills gained could be applied to other situations	social-emotional, language, pre-literacy, numeracy, and physical development.	
Smith 2020 Cluster RCT USA	N = 209 Preschool children aged 3 to 5 years and their parent or guardian. Child's age, %= 3 years Treatment A = 33% Treatment B = 44% Control= 36% 4 – 5 years Treatment A = 67% Treatment B = 56% Control = 64% Parent/guardian age Not reported Parent/guardian education Not reported Socioeconomic status Not reported	Treatment A (access only) Treatment B (access and education) Both groups received weekly high-carotenoid fruit and vegetables at no cost. Produce was distributed directly to parents or guardians. In addition, treatment B received weekly classroom-based fruit and vegetable education, and their caregivers received take-home nutrition education materials. The educational intervention included 2 components: implementation of the Harvest for Healthy Kids curricula along with companion newsletters and recipes for parents. Sessions included a story and colourful picture cards about the fruits and vegetables provided and a hands-on food preparation	No treatment Received neither fruits and vegetables nor education	• Fruit and vegetable intake at 8 weeks follow-up

Study	Population	Intervention	Comparison	Outcomes
		activity (for example, making pumpkin dip), taste testing. Fruit and vegetable characters (for example, Carrie Carrot) were present during each session. Parents received newsletters that contained information on shopping for fruits and vegetables, the primary nutrients provided, safe preparation and storage tips, a fitness tip, and an fruits and vegetables, recipe with the nutritional breakdown per serving.		
Toussaint 2021 Cluster RCT Netherlands	N = 249 Child's age, mean (SD) 3.0 (0.2) Parent/carer's age Not reported Level of Education of Respondent (98% parents), % Lower education = 20% Intermediate education = 43% Higher education = 37% Socioeconomic status Not reported	A Healthy Start (AHS) and PLAYgrounds for TODdlers (applied in succession, but only nutrition intervention reported) AHS focused on the knowledge and practices of the teachers in order to be a healthy role models and create a healthy, active and safe environment for children. Modified version of AHS was used to train Early Childhood Education and Care (ECEC) teachers. 3 meetings held which included theory and practical assignments from the basic national AHS module about a healthy childcare environment and in-depth national AHS modules about Nutrition, Physical Activity and Body weight.	No intervention ECEC teachers at control preschools did not receive the intervention programmes	• BMI z-score at 9 months follow-up • BMI at 9 months follow-up • Changes in attitude, confidence and knowledge as part of parent/carer's intention to change behaviour at 9 months follow-up
Vepsalainen 2022 Cluster RCT	N = 221 Child's age, mean (SD) 5.0(1.2)	Mole's Veggie Adventures mobile app Aimed to increase vegetable acceptance among preschoolers by	Usual care Groups were instructed to continue their normal	• Fruit and vegetables intake measured immediately

Study	Population	Intervention	Comparison	Outcomes
Finland and Poland	Maternal age Not reported Parental educational level, % Upper secondary school or lower 24.9% Bachelor's degree or equivalent 17.6% Master's degree or higher 55.7% Missing 1.8% Socioeconomic status Not reported	familiarising children with fruits and vegetables, and increase fruits. Unlike traditional mobile apps, Mole's Veggie Adventures was built using elements that support the development of self-regulation and social skills. The app consists of 4 seasons, each of which includes 6 fruits and vegetables. At the time of the intervention, the app listed 6 tasks for each of the vegetables and fruits: (1) Learn, (2) Colour, (3) Shape, (4) Taste, (5) Pretend, and (6) Play, and the current version was numbered 0.4.5.0 (7b57516).	routines during the intervention period. They were instructed to refrain from introducing any novel food education methods during the intervention period.	post intervention
Vlasblom 2020 Cluster RCT Netherlands	N = 1995 Children born between January 2009 and September 2010, and their parents Child's age Not reported Mother's age Not reported Mother's educational level, % Low Intervention = 15.3% Control = 13.8% Mid Intervention = 38.5% Control = 33.4% High Intervention = 46.2%	<u>BBOFT+</u> Included targeted education and guidance of parents in applying the principles of stimulus control, modelling and classic conditioning, thereby increasing positive parenting skills. The intervention received during all well-child visits, such as 8 to 13 visits of 10–20 minutes in the first three years. To support counselling, the Youth Health Care (YHC) professionals used a small, calendar-like booklet. The front side of the booklet consisted of pictures of parents and children illustrating the desired behaviour, the backside provided all age-appropriate items (8–15 per visit) to be discussed with parents by YHC professionals during the	<u>Standard care</u> Regular well-child visits with standard information to stimulate healthy child development. This might include information on feeding, physical activity, sleep routine, etc. The professionals in the control group did not receive any specific training regarding overweight prevention, nor specific supporting materials.	• Sugar sweetened beverage intake at child age 36 months • BMI at child age 36 months

Study	Population	Intervention	Comparison	Outcomes
	Control = 52.8% Father's educational level, % Low Intervention = 16% Control = 20.3% Mid Intervention = 42.1% Control = 33.1% High Intervention = 41.9% Control = 16.6% Socioeconomic status Not reported	visits. The booklet was specifically designed to be suited for all parents, including those with low literacy skills.		
Wen 2022 RCT Australia	N = 1155 Women ≥16 years old who were 24–34 weeks pregnant attending antenatal clinics Child's age Not reported Mother's age, % = 16 - 24 years = 8% 25 – 29 years = 24% 30 - 34 years = 38% 35 - 39 years = 23% 40 – 49 years = 7% Mother's educational level, % Up to HSC to TAFE or diploma = 34% University = 66% Mother's employment status, %	<u>Information and support provision</u> Between 12 and 24 months of age, we implemented staged interventions at three time pointsH 12–15 months, 15–18 months and 18–24 months and was either: Telephone support: 9 sessions to mothers were made by Child and Family Health Nurses. Each support session was conducted for about 30–60 min after mailing each of the intervention booklets at specific time points. 9 telephone support scripts were developed to guide the intervention sessions. SMS: 9 staged SMS interventions were implemented following mailing of the intervention booklets at the specific time points. A 2-way automated SMS system was used to send the SMSs twice a week for 4 weeks at a	<u>Usual care</u> Mothers received usual care comprising at least one nurse visit for general support at home and possible multiple home visits for vulnerable families from the local health districts.	• Sugar sweetened beverage intake at 24 months follow-up • Fruit intake at 24 months follow-up • Vegetable intake at 24 months follow-up • BMI at 24 months follow-up • BMI z-score at 24 months follow-up Use of cups and bottles at 24 months follow-up

Study	Population	Intervention	Comparison	Outcomes
	Employed (employed or paid or unpaid maternity leave) = 62% Other = 38% Annual household income, % <40 000$ = 12% 40 000$ - 79 999$ = 22% ≥80 000$ = 55%	predetermined time (10 a.m.–1 p.m.) for the period of 12 and 24 months.		

AHS: a healthy start; BMI: body mass index; BBOFT: breastfeeding, breakfast, outdoors, limiting sweet beverages (in Dutch, F) and minimal TV and computer time; DG: digital games; ECC: early childhood centre; ECEC: early childhood education and care; FCCP: Family child care providers; g: gram; HEI: Healthy eating index; HSC: higher secondary certificate; n: number of participants; NR: not reported; PFWG: Portuguese food wheel guide; NR: not reported; RCT: randomised controlled trial; SB: story book; SBS: story book and sticker; SD: standard deviation; SES: socioeconomic status; SMS: short messaging system; TAFE: technical and further education; YHC: Youth Health Centre

See the full evidence tables in appendix D and the forest plots in appendix E.

Summary of the evidence

The below paragraphs summarise the evidence for the 9 comparisons:

1. Interventions using information provision versus status quo (including no treatment).
2. Interventions using information provision on infant feeding versus other information provision.
3. Behavioural intervention for example role modelling or interventions using praise and rewards) versus status quo (including no treatment).
4. Behavioural intervention (prompting with or without modelling) versus behavioural intervention (modelling only).
5. Interventions aimed at improving access to healthy foods and drinks (exposure) versus status quo (including no treatment).
6. Multicomponent interventions using information provision plus behavioural intervention versus other information provision.
7. Multicomponent intervention using information provision plus interventions aimed at improving access to foods and drinks (exposure) versus status quo (including no treatment).
8. Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based intervention) versus status quo (including no treatment).
9. Multicomponent interventions using behavioural intervention plus interventions aimed at improving access to foods and drinks (exposure) versus status quo (including no treatment).

For outcomes with evidence from single studies, additional information on the intervention components (mode of delivery, intervention aimed at individuals or groups, who delivers the intervention, where the intervention is delivered and behaviour change models, techniques and theories) are included in the summary. For outcomes with evidence form 2 or more studies, sensitivity analysis was conducted, and evidence has been presented separately for

each component (mode of delivery, intervention aimed at individuals or groups, who delivers the intervention and where the intervention is delivered) available within the evidence.

Comparison 1: Interventions using information provision versus status quo (including no treatment) – Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education, and parental age)

Sixteen studies were included in this comparison. The quality of evidence was very low to moderate quality.

Evidence suggested that there was an important benefit for information provision compared to status quo for the outcome no bottle at bedtime.

There was no evidence of important difference or no important difference between the information provision and status quo for all other outcomes (sugar sweetened beverage intake, sweetened milk intake, no sugar sweetened beverage, fruit and vegetable intake, fruit intake, vegetable intake, child dietary questionnaire (CDQ) – fruit and vegetable absolute score, CDQ- non-milk sweetened beverage, healthy eating habits, did not consume any fruit, did not consume any vegetables, BMI z-score, BMI, BMI percentile, BMI standard deviation score, drinking from a cup, teachers' knowledge score, teachers' attitude score, teachers' practices score, and teachers' confidence score).

Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – High socio-economic status strata (Mixed strata for parental education, and parental age)

One study contributed to this evidence. The quality of the evidence was very low.

There was no important difference or no important difference for provision of healthy eating information when compared with status quo in high socioeconomic groups for the outcomes sugar sweetened beverage, fruit intake, vegetable intake and BMI z-score.

Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Medium socio-economic status strata (Mixed strata for parental education, and parental age)

One study contributed to this evidence. The quality of the evidence was very low.

There was no important difference or no important difference for provision of healthy eating information when compared with status quo in medium socioeconomic groups for the outcomes sugar sweetened beverage, fruit intake, vegetable intake and BMI z-score.

Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Low socio-economic status/disadvantaged populations strata (Mixed strata for parental education, and parental age)

Four studies contributed to this evidence. The quality of the evidence was very low to moderate.

The evidence suggested an important benefit for provision of healthy eating information when compared with status quo in low socioeconomic/disadvantage groups for the outcomes 'never consumed squash', 'no longer using a bottle at 18 months of age', 5 or 6 correct answers out of 6 knowledge questions and 'feels 'very confident' in being able to provide foods that are good for child'.

There was a possible important benefit for healthy eating information provision when compared with status quo in low socioeconomic/disadvantage groups for the outcome 'pure unsweetened fruit juice intake regularly (at least once a week)'.

There was an important benefit for status quo when compared with healthy eating information provision in low socioeconomic/disadvantage groups for the outcome 'vegetable (baked beans) intake regularly (at least once a week)'.

There was a possible important benefit for status quo when compared with healthy eating information provision in low socioeconomic/disadvantage groups for the outcome 'vegetable (peas) intake regularly (at least once a week)'.

There was no evidence of important difference or no important difference for provision of healthy eating information when compared with status quo in low socioeconomic/disadvantage groups for all other outcomes.

Comparison 1: Interventions using information provision versus status quo (Mixed strata for level of socioeconomic deprivation, parental education, and parental age) - Sensitivity analysis for components 1 to 6 of the protocol for outcomes with multiple studies

Twelve studies contributed to the sensitivity analysis.

The sensitivity analysis was conducted on outcomes from the overall estimates for which more than 1 study contributed to the outcome. These outcomes were: sugar sweetened beverages (ml/day), sugar sweetened beverage intake ≥ daily, composite outcome of fruit and vegetable intake, vegetable intake (GIV estimate), vegetable intake (continuous estimate), and BMI z-score.

Component 1: Mode of delivery

The quality of the evidence for this component was very low to moderate.

The evidence suggests that healthy eating information interventions delivered using face-to-face and printed interventions when compared with status quo showed an important benefit for the outcome vegetable intake.

There was no evidence of important difference or no important difference for interventions delivered using face-to-face interventions only, printed interventions only, audio (telephone) or textual (short message service, SMS) interventions, face-to-face, printed and audio interventions, face-to-face, printed and electronic (online) interventions and printed and visual (pictures) interventions when compared with status quo for all other outcomes.

Component 2: Interventions aimed at individuals or groups

The quality of the evidence for this component was very low to moderate.

The evidence suggests no evidence of important difference or no important difference for healthy eating information interventions aimed at individuals or groups when compared with status quo for all outcomes.

Component 3: Individualised/tailored interventions based on needs or general interventions, aimed at the population of interest

The quality of the evidence for this component was very low to moderate.

The evidence suggests no evidence of important difference or no important difference for healthy eating information interventions using individualised/tailored interventions or general interventions when compared with status quo for all outcomes.

Component 4: Who delivers the intervention

The quality of the evidence for this component was very low to moderate.

The evidence suggests an important benefit for healthy eating information intervention delivered by early years professionals (preschool staff) when compared with status quo, for the outcome vegetable intake (10 weeks intervention).

There was no important difference for healthy eating information interventions delivered by healthcare practitioner, health or social care worker, peers, healthy eating and drinking champions, and other early years professionals such as teachers when compared to status quo for all other outcomes.

Component 5: Where the intervention was delivered

The quality of the evidence for this component was very low to moderate.

The evidence suggests an important benefit for healthy eating information intervention delivered in nurseries/playgroups/schools when compared with status quo, for the outcome vegetable intake.

The evidence suggests that there was no evidence of important difference or no important difference for healthy eating information intervention delivered during home visits, in healthcare settings, in nurseries/playgroups/schools, and in other settings such as over the telephone when compared to status quo for all other outcomes.

Component 6: Behavioural change models, techniques and theories

The quality of the evidence for this component was very low to moderate.

The evidence suggests that there was no evidence of important difference or no important difference for healthy eating information intervention delivered using socio-ecological model in health promotion programmes, theories of information processing, the elaboration likelihood model and the precaution-adoption process model, social cognitive theory and/or social ecological approach, social support theoretical model, and health belief model, when compared to status quo for all outcomes.

Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Low socio-economic status/disadvantaged populations strata (Mixed strata for parental education, and parental age) - Sensitivity analysis for components 1 to 6 of the protocol for outcomes with multiple studies

Two studies contributed to the sensitivity analysis, with 1 relevant outcome – fruit and vegetable intake.

Component 1: Mode of delivery

The quality of the evidence for this component was low.

The evidence suggests that there was no important difference for information provision provided face-to-face or using face-to-face and audio interventions among low socioeconomic/disadvantaged groups for the outcome fruit and vegetable intake, when compared with status quo.

Component 2: Interventions aimed at individuals or groups

The quality of the evidence for this component was low.

The evidence suggests that there was no important difference for information provision aimed at individuals among low socioeconomic/disadvantaged groups for the outcome fruit and vegetable intake, when compared with status quo.

Component 3: Individualised/tailored interventions based on needs or general interventions, aimed at the population of interest

The quality of the evidence for this component was low.

The evidence suggests that there was no important difference for individualised/tailored information based on needs among low socioeconomic/disadvantaged groups for the outcome fruit and vegetable intake, when compared with status quo.

Component 4: Who delivers the intervention

The quality of the evidence for this component was low.

The evidence suggests that there was no important difference for information provision delivered by peers (parent educators) or healthy eating and drinking champions (local volunteer mothers) among low socioeconomic/disadvantaged groups for the outcome fruit and vegetable intake, when compared with status quo.

Component 5: where the intervention was delivered

The quality of the evidence for this component was low.

The evidence suggests that there was no important difference for information provision delivered during home visits to low socioeconomic/disadvantaged groups for the outcome fruit and vegetable intake, when compared with status quo.

Component 6: Behaviour change models, techniques and theories

The quality of the evidence for this component was low.

There was no important difference for information provision using social cognitive theory and socioecological approach or using social support theoretical model among low socioeconomic/disadvantaged groups for the outcome fruit and vegetable intake, when compared with status quo.

Comparison 2: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus control (other information provision) - Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Eight studies contributed to this comparison. The quality of the evidence in this comparison was very low to moderate.

The evidence suggests that there was an important benefit for healthy eating information provision to enhance healthy eating and drinking when compared to other information provision for the outcomes ‘attitudes about toddler milk (I think serving toddler milks to my child is overall positive)’ and ‘intent to serve toddler milk’.

The evidence suggests that there was an important benefit for other information provision when compared to healthy eating information provision for the outcome ‘intent to serve fruit drinks’.

There was no important difference or no important difference for healthy eating information provision when compared with other information provision for all other outcomes (discontinued breastfeeding, sweets, snacks and soft drinks, sweet drinks, fruit and vegetable intake, fruit intake, vegetable intake, CDQ score for fruit and vegetable intake, healthy eating index, total fats intake, daily intake of saturated fats, saturated fats intake, daily intake of sugars, sugars intake, attitudes about fruit drinks, intent to cut back on toddler milk and intent to cut back on fruit drinks).

Comparison 2: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus control (other information provision) (Mixed strata for level of socioeconomic deprivation, parental education and parental age) - Sensitivity analysis for components 1 to 6 of the protocol for outcomes with multiple studies

Five studies contributed to the sensitivity analysis, with 1 relevant outcome – fruit and vegetable intake.

Component 1: Mode of delivery

The quality of the evidence in this component was very low.

The evidence suggests that there was an important benefit for healthy eating information provision delivered using face-to-face interventions when compared to other information provision for the outcome fruit and vegetable.

There was no evidence of important difference or no important difference for healthy eating information provision using face-to-face and printed interventions, printed and audio (telephone) interventions or printed and visual (compact disk (CD)/ digital versatile disk (DVD)) interventions, when compared with other information provision, for the outcome fruit and vegetable intake.

Component 2: Interventions aimed at individuals or groups

The quality of the evidence for this component was very low.

The evidence suggests that there was an important benefit for healthy eating information provision aimed at groups when compared to other information provision, and no important difference for healthy eating information provision aimed at individuals when compared to other information provision, for the outcome fruit and vegetable intake.

Component 3: Individualised/tailored interventions or general interventions

The quality of the evidence for this component was very low.

The evidence suggests that there was an important benefit for provision of individualised/tailored healthy eating information when compared to other information provision, and no important difference for provision of general healthy eating information aimed at individuals when compared to other information provision, for the outcome fruit and vegetable intake.

Component 4: Who delivered the intervention

The quality of the evidence for this component was very low to low.

The evidence suggests that there was an important benefit for healthy eating information provision delivered by healthcare practitioners, health or social care workers such as nurses and registered dieticians when compared to other information provision for the outcome fruit and vegetable intake.

There was no important difference for health eating information provision delivered by healthy eating and drinking practices' champion, such as parents or trained telephone interviewers when compared to other information provision for the outcome fruit and vegetable intake.

Component 5: Where the intervention was delivered

The quality of the evidence in this component was very low.

The evidence suggests that there was an important benefit for healthy eating information provision delivered in nurseries/playgroups/schools when compared with other information provision, for the outcome fruit and vegetable intake.

There was no evidence of important difference or no important difference for healthy eating information provision delivered at home with family or over the telephone when compared with other information provision, for the outcome fruit and vegetable intake.

Component 6: Behavioural change model, theories, and techniques

The quality of the evidence in this component was very low to low.

The evidence suggests that there was an important benefit for healthy eating information provision delivered using social cognitive theory, or where no theory was mentioned when compared with other information provision, for the outcome fruit and vegetable intake.

There was no important difference or no important difference for healthy eating information provision delivered using theory of planned behaviour and social ecological theory when compared with other information provision, for the outcome fruit and vegetable intake.

Comparison 3: Behavioural interventions (for example, role modelling or interventions using praise and rewards) versus status quo (including no treatment) - Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Three studies contributed to this comparison. The quality of the evidence was very low to low.

The evidence suggests that there was an important benefit for behavioural interventions when compared to status quo for the outcome celery intake.

Evidence suggests that there was a possible important benefit for behavioural interventions when compared to status quo for the outcome cauliflower intake.

There was no important difference for behavioural interventions when compared to status quo for all other outcomes (vegetable intake, vegetables (peppers, carrots and snap peas) intake.

Comparison 3: Behavioural interventions (for example, role modelling or interventions using praise and rewards) versus status quo (including no treatment) (Mixed strata for level of socioeconomic deprivation, parental education and parental age)- Sensitivity analysis for components 1 to 6 of the protocol for outcomes with multiple studies

Three studies contributed to the sensitivity analysis, with 1 relevant outcome – vegetable intake.

Component 1: Mode of delivery

The quality of the evidence in this component was very low to low.

The evidence suggests that there was no evidence of important difference or no important difference for behavioural interventions delivered face-to-face or visually using videos when compared with status quo, for the outcome vegetable intake.

Component 2: Interventions aimed at individuals or groups

The quality of the evidence in this component was very low to low.

The evidence suggests that there was an important benefit for behavioural interventions aimed at individuals when compared with status quo, for the outcome vegetable intake.

Evidence suggested that there was no important difference behavioural interventions aimed at groups when compared with status quo, for the outcome vegetable intake.

Component 3: Individualised/tailored interventions or general interventions

The quality of the evidence in this component was very low to low.

The evidence suggests that there was no evidence of important difference or no important difference for individualised/tailored behavioural interventions or general interventions combined with individual/tailored interventions when compared with status quo, for the outcome vegetable intake.

Component 4: Who delivered the intervention

The quality of the evidence in this component was very low to low.

The evidence suggests that there was a possible important benefit for behavioural interventions compared with status quo when who delivers the intervention was unclear, for the outcome vegetable intake.

The evidence suggests that there was no evidence of important difference or no important difference for behavioural interventions delivered by healthy eating and drinking practices' champion (parents) or early years professional (teacher) when compared with status quo, for the outcome vegetable intake.

Component 5: Where the intervention was delivered

The quality of the evidence in this component was very low to low.

The evidence suggests that there was no evidence of important difference or no important difference for behavioural interventions delivered in nurseries/playgroups/schools or at home and in a laboratory when compared with status quo, for the outcome vegetable intake.

Component 6: Behavioural change model, theories, and techniques

The quality of the evidence in this component was very low.

The evidence suggests that there was no important difference for behavioural interventions delivered in nurseries/playgroups/schools or at home and in a laboratory when compared with status quo, for the outcome vegetable intake.

Comparison 4: Behavioural intervention (prompting with or without modelling) versus Behavioural intervention (modelling only) - Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

One study contributed to this comparison. The quality of the evidence was very low.

The evidence suggests that there was no important difference for behavioural intervention using prompting with or without modelling when compared with behavioural intervention using modelling alone for the outcome fruit intake.

Comparison 5: Interventions aimed at improving access to healthy foods and drinks (exposure) versus Status quo (including no treatment) - Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Seven studies contributed to this comparison. The quality of the evidence was very low to low.

The evidence suggests that there was an important benefit for interventions aimed at improving access to healthy foods and drinks when compared to status quo for the outcome vegetable intake. When the evidence was subgrouped into children with no health or developmental conditions and children with autism spectrum disorder, the evidence showed an important benefit for interventions aimed at improving access to healthy foods and drinks when compared to status quo for the outcome vegetable intake in both subgroups.

Comparison 5: Interventions aimed at improving access to healthy foods and drinks (exposure) versus Status quo (including no treatment) - Low socioeconomic status/ disadvantaged populations strata (Mixed strata for parental education, and parental age)

Two studies contributed to this evidence. The quality of the evidence was low to moderate.

The evidence suggests that there was no important difference for interventions aimed at improving access to healthy foods and drinks in low socioeconomic groups/disadvantaged populations when compared to status quo for the outcomes vegetable intake and composite outcome fruit and vegetable intake.

Comparison 5: Interventions aimed at improving access to healthy foods and drinks (exposure) versus Status quo (including no treatment) (Mixed strata for level of socioeconomic deprivation, parental education and parental age) - Sensitivity analysis for components 1 to 6 of the protocol for outcomes with multiple studies

Seven studies contributed to the sensitivity analysis, with 1 relevant outcome – vegetable intake.

Component 1: Mode of delivery

The quality of the evidence for this component was very low to low.

The evidence suggests that there was an important benefit for interventions aimed at improving access to healthy foods and drinks delivered electronically (digital games) when compared to status quo for the outcome vegetable intake. When the evidence was subgrouped into children with no health or developmental conditions and children with autism spectrum disorder, the evidence showed an important benefit for interventions aimed at improving access to healthy foods and drinks delivered using face-to-face interventions when compared to status quo for the outcome vegetable intake in both subgroups.

The evidence suggests that there was a possible important benefit for interventions aimed at improving access to healthy foods and drinks delivered face-to-face when compared to status quo for the outcome vegetable intake.

There was no evidence of important difference or no important difference for interventions aimed at improving access to healthy foods and drinks delivered using face-to-face and printed interventions or face-to-face and audio interventions when compared to status quo for

the outcome vegetable intake. In a subgroup of children without health or developmental conditions, the evidence showed no evidence of important difference for interventions aimed at improving access to healthy foods and drinks delivered using face-to-face interventions for the outcome vegetable intake.

Component 2: Interventions aimed at individuals or groups

The quality of the evidence for this component was very low.

The evidence suggests that there was an important benefit for interventions aimed at improving access to healthy foods and drinks aimed at groups when compared to status quo for the outcome vegetable intake. In a subgroup of children with autism spectrum disorder or without health or developmental conditions, the evidence showed an important benefit for interventions aimed at improving access to healthy foods and drinks aimed at groups when compared to status quo for the outcome vegetable intake.

There was no important difference for interventions aimed at improving access to healthy foods and drinks aimed at individuals when compared to status quo for the outcome vegetable intake.

Component 3: Individualised/tailored interventions or general interventions

The quality of the evidence for this component was very low.

The evidence suggests that there was an important benefit for interventions aimed at improving access to healthy foods and drinks using general interventions aimed at the population of interest when compared to status quo for the outcome vegetable intake. In a subgroup of children with autism spectrum disorder or without health or developmental conditions, the evidence showed an important benefit for interventions aimed at improving access to healthy foods and drinks using general interventions when compared to status quo for the outcome vegetable intake.

Component 4: Who delivered the intervention

The quality of the evidence for this component was very low to low.

The evidence suggests that there was an important benefit for interventions aimed at improving access to healthy foods and drinks delivered by healthcare practitioners, health or social care workers (trained therapists and assistants) (children with autism spectrum disorder), peer (researcher), or early years professionals (teachers or preschool staff) when compared to status quo for the outcome vegetable intake.

There was no important difference for interventions aimed at improving access to healthy foods and drinks delivered by peers or healthy eating and drinking practices' champions when compared to status quo for the outcome vegetable intake.

Component 5: Where the intervention was delivered

The quality of the evidence for this component was very low to low.

The evidence suggests that there was an important benefit for interventions aimed at improving access to healthy foods and drinks delivered in nurseries/play groups /schools or early intervention agencies (children with autism spectrum disorder) when compared to status quo for the outcome vegetable intake.

There was no important difference for interventions aimed at improving access to healthy foods and drinks delivered at home at parents' convenience when compared to status quo for the outcome vegetable intake.

Component 6: Behavioural change model, theories, and techniques

The quality of the evidence for this component was very low.

The evidence suggests that there was an important benefit for interventions aimed at improving access to healthy foods and drinks delivered with no theory mentioned when compared to status quo for the outcome vegetable intake. When the evidence was subgrouped into children with no health or developmental conditions and children with autism spectrum disorder, the evidence showed an important benefit for interventions aimed at improving access to healthy foods and drinks delivered with no theory mentioned when compared with status quo for the outcome vegetable intake in both subgroups.

Comparison 6: Multicomponent interventions using information provision plus behavioural intervention (story book with vegetable superhero and sticker, or cartoon-like character, or cartoon character brand packaging and stickers) versus information provision (standard information or healthy eating information) - Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Two studies contributed to this comparison. The quality of the evidence was very low.

The evidence suggests that there was a possible important benefit for multicomponent intervention using information provision and behavioural intervention (cartoon character brand packaging and stickers) when compared with healthy eating information provision only for the outcome vegetable intake.

The evidence suggests that there was an important benefit for provision of information (standard information) when compared with multicomponent interventions using information provision and behavioural intervention (story book with vegetable superhero and sticker) for the outcomes carrot intake and purple cabbage intake.

The evidence suggests that there was an important benefit for provision of information (standard information) when compared with multicomponent interventions using information provision and behavioural intervention (story book or digital game with character) for the outcome purple cabbage intake.

There was no important difference for multicomponent interventions using information provision and behavioural intervention (story book with vegetable superhero and sticker) when compared with provision of standard information for the outcomes lettuce intake, cucumber intake and tomatoes intake. There was important difference for multicomponent interventions using information provision and behavioural intervention (cartoon-like characters) when compared with provision of standard information for the outcomes lettuce intake, carrot intake, cucumber intake and tomatoes intake.

Comparison 7: Multicomponent intervention using information provision plus interventions aimed at improving access to foods and drinks (exposure) versus status quo (including no treatment) – Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education, and parental age)

Two studies contributed to this comparison. The quality of the evidence was very low to low.

The evidence suggests that there was an important benefit for multicomponent intervention using information provision and interventions aimed at improving access to foods and drinks (exposure) when compared to status quo for the composite outcome fruit and vegetable intake (10 weeks intervention).

There was no important difference for multicomponent intervention using information provision and interventions aimed at improving access to foods and drinks (exposure) when compared to status quo for the outcome vegetable intake (4 weeks intervention).

Comparison 7: Multicomponent intervention using information provision plus interventions aimed at improving access to foods and drinks (exposure) versus status quo (including no treatment) – Low socio-economic status/ disadvantaged populations strata (Mixed strata for parental education, and parental age)

One study contributed to this evidence. The quality of the evidence was moderate.

The evidence suggests that there was an important benefit for multicomponent intervention using information provision and interventions aimed at improving access to foods and drinks (exposure) in low socioeconomic/disadvantaged groups when compared to status quo for the outcome fruit and vegetable intake.

Comparison 8: Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based intervention) versus status quo (including no treatment) – Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education, and parental age)

Four studies contributed to this evidence. The quality of the evidence was low.

The evidence suggests that there was no important difference for multicomponent interventions using information provision and behavioural interventions (role modelling) and interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based intervention) when compared with status quo for all outcomes (sugared milk drinks, sugared soft drinks, sweet drinks servings, fruit juice, fruit and vegetable intake, fresh fruit intake, vegetable intake, and BMI z-score).

Comparison 8: Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based intervention) versus status quo (including no treatment) – Low socioeconomic status/disadvantaged populations strata (Mixed strata for parental education, and parental age)

One study contributed to this evidence. The quality of the evidence was moderate.

The evidence suggests that there was an important benefit for multicomponent interventions using information provision and behavioural interventions (role modelling) and interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based intervention) in low socioeconomic status/disadvantaged groups when compared with status quo for the outcome fruit and vegetable intake.

Comparison 8: Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based intervention) versus status quo (including no treatment) (Mixed strata for level of socioeconomic deprivation, parental education, and parental age) – Sensitivity analysis for components 1 to 6 of the protocol for outcomes with multiple studies

Three studies contributed to this analysis, with 1 outcome – fruit and vegetable intake.

Component 1: Mode of delivery

The quality of the evidence was very low to low.

There was no important difference for multicomponent interventions using information provision and behavioural interventions (role modelling) and interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based intervention) delivered using face-to-face and printed interventions when compared with status quo for the outcome fruit and vegetable intake.

Component 2: Interventions aimed at individuals or groups

The quality of the evidence was very low to low.

There was no important difference for multicomponent interventions using information provision and behavioural interventions (role modelling) and interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based intervention) delivered using interventions aimed at groups when compared with status quo for the outcome fruit and vegetable intake.

Component 3: Individualised/tailored interventions or general interventions

The quality of the evidence for this component was very low.

The evidence suggests that there was no important difference for multicomponent interventions using information provision and behavioural interventions (role modelling) and interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based intervention) delivered using general interventions aimed at the population of interest when compared with status quo for the outcome fruit and vegetable intake.

Component 4: Who delivered the intervention

The quality of the evidence for this component was very low to low.

There was no important difference for multicomponent interventions using information provision and behavioural interventions (role modelling) and interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based intervention) delivered by peers (including the research team, health educators, gardener, or trained program leader) when compared with status quo for the outcome fruit and vegetable intake.

Component 5: Where the intervention was delivered

The quality of the evidence for this component was very low to low.

There was no important difference for multicomponent interventions using information provision and behavioural interventions (role modelling) and interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based intervention) delivered in nurseries/play groups/schools only or at community venues when compared with status quo for the outcome fruit and vegetable intake.

Component 6: Behavioural change model, theories, and techniques

The quality of the evidence for this component was very low.

The evidence suggests that there was no important difference for multicomponent interventions using information provision and behavioural interventions (role modelling) and interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based intervention) where no theory was mentioned when compared with status quo for the outcome fruit and vegetable intake.

Comparison 9: Multicomponent interventions using behavioural intervention (tangible non-food reward-sticker) plus interventions aimed at improving access to foods and drinks (exposure) versus status quo (including no treatment) – Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education, and parental age)

Two studies contributed to this comparison. The quality of the evidence for this comparison was low to moderate.

The evidence suggests that there was an important benefit for multicomponent interventions using behavioural interventions (sticker) and interventions aimed at improving access to foods and drinks (exposure) when compared to status quo for the outcome vegetable intake (14 days intervention).

The evidence suggests that there was no important difference for multicomponent interventions using behavioural interventions (combined sticker and praise) and interventions aimed at improving access to foods and drinks (exposure) when compared to status quo for the outcome vegetable intake (3 weeks intervention).

See appendix F for full GRADE tables.

Economic evidence

Included studies

No economic studies were identified which were applicable to this review question. See the literature search strategy in appendix B and economic study selection flow chart in appendix G.

Excluded studies

Economic studies not included in this review are listed, and reasons for their exclusion are provided in appendix J.

Economic model

No economic modelling was undertaken for this review because the committee agreed that other topics were higher priorities for economic evaluation.

The committee's discussion and interpretation of the evidence

The outcomes that matter most

Appropriate milk feeding (continued breastfeeding and avoidance of formula milk from age 1), beverage intake (no sugar sweetened drinks and main drinks milk and water), and appropriate food and nutrient intake patterns including fruits and vegetables were prioritised as they align with the government advice on healthy eating and drinking for children aged over 12 months and are directly linked to shaping dietary preferences in later life and can have lasting implications. Babies or children's growth and dental health were also prioritised as critical outcomes by the committee as indicators of healthy eating and drinking. These were prioritised as they align with the government advice on healthy eating and drinking for children aged over 12 months and are directly linked to shaping dietary preferences in later life and can have lasting implications.

The committee agreed that use of cups and not bottles from 12 months of age in line with Government guidance and changes in attitude, confidence and knowledge as part of parent/carer's intention to change behaviour should also be important outcomes. The latter was agreed as an important outcome because parent/carer's attitudes and behaviours have a direct implication on the eating and drinking practices of their children.

Evidence was found and reported for all outcomes in the protocol.

The quality of the evidence

The quality of the evidence was assessed using GRADE methodology. The quality of the evidence ranged from moderate to very low and the majority of evidence was of very low quality. The main issues with the quality were due to bias arising from the methodological quality of the studies mostly resulting from lack of blinding, lack of allocation concealment, loss to follow-up and self-reported outcomes, serious or very serious inconsistency of the findings across studies, seriously indirect outcomes (study population included children aged >5 years and the proportion is unclear), and imprecision. Individual studies were assessed for methodological quality based on their study design. Randomised trials were assessed using the Cochrane Rob 2.0 tool and cluster randomised studies were assessed using the Cochrane Risk of Bias 2.0 tool for cluster randomised trials.

Benefits and harms

Overall, the committee thought that the evidence base was large but mainly uninformative in terms of what interventions could be effective in promoting healthy eating and drinking practices in children. Relatively few interventions were found to have any effect on outcomes of interest and some of the outcomes reported were not helpful in determining whether the intervention had an impact on healthy eating or drinking practices, for example, they reported on improvement in intake of a single particular vegetable. The committee also discussed that the comparison group 'status quo' may vary between studies, and may differ from current practice in the UK, making it difficult to interpret the findings. The committee also acknowledged variability in the pooled interventions as well as variability in the reporting and measurement of outcomes. Furthermore, the committee noted that the minimal effects seen in the evidence were only observed in the short term and none of the studies assessed effects of the interventions in the long term. Regardless, the committee used evidence from this review as best they could, supported by the qualitative evidence from evidence review R and their expertise to make recommendations on this topic. They also referred to the guidance by the Scientific Advisory Committee on Nutrition (SACN) in their report on feeding young children aged 1 to 5 years (SACN 2023).

The evidence on interventions using information provision or education (versus status quo) mostly had no effect on the outcomes of intake of sugar sweetened beverages (including fruit juices and squash), fruit intake, vegetables intake, food and nutrient intake patterns for fat, sugars and iron intake, growth outcomes (BMI and length), use of cups and bottles, and knowledge, confidence, attitudes, and practices outcomes. There were some beneficial effects found in the evidence, for example not using bottles at bedtime (low quality), and for young children in low socioeconomic status families , 'never consuming squash' (low quality). Sensitivity analysis looking at the different components of the interventions (how and where intervention was delivered and by whom, whether the intervention was individual or group-based, whether intervention was tailored or generic, and whether the intervention used any behavioural change models, techniques or theories) also showed very little effect on the outcomes. The committee acknowledged the general low quality of the evidence but concluded that information provision alone does not seem to be sufficient to improve healthy eating and drinking practices in children.

Generally, and informed by their experience and the qualitative evidence (in evidence review R), the committee agreed that one of the barriers to healthy eating in children is lack of access and exposure to healthy foods. There was evidence that showed that multicomponent interventions involving information provision and improving access to healthy foods and drinks by exposure showed an important benefit for increasing fruit and vegetables intake but not for other outcomes. The committee discussed from their experience that it would be expected that combination of interventions might result in benefits although this was not strongly reflected in the evidence. The committee acknowledged that the evidence showing benefit was of very low quality, but agreed that information provision should be combined with other measures such as schemes that help people obtain healthy foods, for example, the Healthy Start scheme, free school meals or local initiatives. This is particularly relevant for families that experience socioeconomic deprivation and poverty (especially where such schemes have eligibility criteria based on income). Based on the qualitative evidence (in evidence review R) and their expertise, the committee also agreed that healthcare professionals should also where relevant to the families they are supporting, signpost to local interventions that can help parents and carers build confidence and skills in preparing and providing healthy foods to their children, such as cook and eat groups which maybe offered in Family Hubs, although the committee acknowledged the geographical variation in availability of such services. Lastly, the committee agreed that the information on healthy eating practices provided alongside signposting and promotion of healthy food and cooking schemes and programmes, should be independent, non-commercial, evidence-based and consistent..

The committee acknowledged that from age 1 year onwards, while there are very few routine contacts with healthcare professionals many families will interact regularly with early years professionals. The committee agreed that healthcare professionals who see young children in different settings, their parents or carers and early years professionals caring for children in nurseries, childminders and other settings play an important role in supporting healthy eating and advising families about healthy eating and drinking in early childhood. The committee wanted to highlight some additional important topics which should be included when discussing healthy eating and drinking in children, based on current government advice and their expertise, such as the benefits of homemade food (without adding sugar, salt or sweetening agents), the importance of families eating together, encouraging children to repeatedly handle and taste a wide range of fruits and vegetables, and avoiding food-based rewards. These are discussed in more detail in the qualitative evidence review R.

Evidence on behavioural interventions such as role modelling (showing an example) and using praise and rewards (such as stickers) also largely showed no effect on outcomes of interest, apart from some benefit on vegetable intake, particularly if the intervention was aimed at individuals rather than groups. Again the quality of the evidence was of low or very low quality and committee were not confident that the evidence truly reflected the impact such interventions, could potentially have on children's eating habits. The committee agreed to recommend that families should be encouraged to eat together, and that parents and carers can set a good example through the food choices they make for themselves. They also recommended that parents should be advised not to use food-based rewards (such as snacks or other treats) because this can contribute to unhealthy eating but instead they could use stickers or other non-food based rewards for their children.

The sensitivity analysis on the evidence on information provision or education according to different modes of information delivery (face-to-face, printed materials, audio or visual resources) showed inconsistent findings but mainly no effect. The committee did not find the evidence to be helpful to inform recommendations but discussed that in their experience, online sources of information are useful for parents and carers to have as a reference and recommended that when information is being provided to families about healthy eating and

drinking, printed and online sources of information should be used to complement and reinforce the discussions. The committee signposted to available NHS resources such as Start for Life materials. They also discussed that there are non-NHS/non-government affiliated organisations that provide independent, non-commercial and evidence-based information for families, for example, the charity First Steps Nutrition Trust. The committee were very aware of the influence that promotional and marketing efforts by commercial companies may have on parents and carers food choices and how these companies may give misleading or not evidence-based information that go against government guidance so they discussed the importance of the information being non-commercial, independent and evidence-based.

The committee discussed the important role that early years settings play in promoting, encouraging and enabling healthy eating in children. Although limited in terms of quantity and quality, the committee noted that there was some evidence of benefit on vegetable intake when information provision or education was delivered by early years professionals to pre-school children. The committee discussed the recommendations aimed at early years settings in the NICE guideline on overweight and obesity management [ADD LINK WHEN PUBLISHED] and agreed that it is important to make recommendations for early years professionals on their role on promoting healthy eating and drinking in children, and not just on overweight and obesity management, although the topics do overlap. So the committee drew on the limited evidence from this review, the qualitative evidence in evidence review R and their expertise to make a recommendation for the early years settings to prioritise healthy eating and drinking, adopting a whole setting approach (i.e. an approach encompassing the provision of healthy meals, drinks and snacks meeting Government guidelines, served in an appropriate manner, as well as food related education and activities such as cooking and growing) . See further discussion and detail about the recommendation in evidence review R.

Cost effectiveness and resource use

No economic evidence was identified in this area. The recommendations are expected to have low-to-moderate resource implications to commissioners and providers of services relating to the additional time required to ensure that healthcare professionals have independent and non-commercial, evidence-based, and consistent information about healthy eating and drinking for children aged 1 to 5 years (which may require additional training) and to provide appropriate information and advice to parents on their children's healthy eating and drinking, according to the child's and family's individual circumstances. However, it was noted that some information on this issue is already provided to parents in current practice. The recommendations for early year settings reflect current government advice, but might have resource implications for settings where the recommendations are not already being actioned. The committee agreed that the recommendations are expected to result in clinical benefits for the children aged 1 to 5 years and cost-savings for the healthcare service by promoting adoption of healthy eating habits, which in turn, is likely to lead to future positive outcomes such as the children's weighing within a healthy range, prevention of diabetes and better oral health; these benefits and associated cost-savings are anticipated to outweigh, at least partially, implementation costs.

Recommendations supported by this evidence review

This evidence review supports recommendations 1.5.11 to 1.5.13. Other evidence supporting these recommendations can be found in the evidence review R on facilitators and barriers to increase the uptake of government advice on appropriate and timely introduction to solids and healthy eating and drinking in children.

References – included studies

Effectiveness studies

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Appendices

Appendix A Review protocols

Review protocol for review question: What interventions are effective to promote healthy eating and drinking practices, including complementary feeding, in children from 12 months to 5 years (in line with government advice)?

Table 3: Review protocol

Field	Content
PROSPERO registration number	CRD42022376770
Review title	Interventions to promote healthy eating and drinking practices, including complementary feeding, in children from 12 months to 5 years (in line with government advice)
Review question	What interventions are effective to promote healthy eating and drinking practices, including complementary feeding, in children from 12 months to 5 years (in line with government advice)?
Objective	To determine which interventions are the most effective to promote healthy eating and drinking practices, including complementary feeding, in children from 12 months to 5 years.
Searches	The following databases will be searched: • Cochrane Central Register of Controlled Trials (CENTRAL) • Cochrane Database of Systematic Reviews (CDSR) • Embase • Emcare • MEDLINE • Epistemonikos • CINAHL • International Health Technology Assessment database • HTA Searches will be restricted by: • English language only • human studies only.

Field	Content
	The full search strategies for MEDLINE database will be published in the final review. For each search, the principal database search strategy is quality assured by a second information scientist using an adaptation of the PRESS 2015 Guideline Evidence-Based Checklist.
Condition or domain being studied	Healthy eating and drinking practices for children from 12 months to 5 years
Population	Inclusion: • children from 12 months to 5 years and their parents, carers or early years professionals. *Note: interventions delivered before 12 months after birth (but not during the antenatal period) will also be eligible for inclusion, as long as all other aspects of the protocol criteria are met. This is because these interventions may be delivered at any point after birth. The outcomes should however be measured between 12 months and 5 years.* Exclusion: • children following a specific diet for a medical condition.
Intervention	**Interventions will be included if the main aim is to promote heathy eating and drinking practices in the population of interest. Interventions will be organised according to the following groups:** **intervention group 1**: interventions using information provision and/or education to enhance healthy eating and drinking practices **intervention group 2:** behavioural interventions (for example, role modelling or interventions using praise and rewards) **intervention group 3:** interventions aimed at improving access to heathy foods and drinks (that is, provision of healthy food/drink, welfare schemes designed to enable access to healthy food/drink) **intervention group 4:** multicomponent interventions (interventions that combine more than 1 intervention listed above). The committee anticipated that, along with the intervention, studies would report at least 1 domain for each of the components noted below. Sensitivity analyses will be done according to these if enough data is available. • **Component 1:** mode of delivery: ○ face-to-face (in person, videoconference) ○ printed ○ electronic ○ audio ○ visual

Field	Content
	○ textual (involving written text). • **Component 2:** intervention aimed at individuals or groups: ○ individual based ○ group based. • **Component 3:** individualised /tailored interventions or general: ○ on demand, tailored interventions based on needs ○ general, aimed to all the population of interest. • **Component 4:** who delivers the intervention: ○ healthcare practitioner, health or social care worker (report what type) ○ peer (person with professional education on providing information and education on healthy eating and drinking practices) ○ healthy eating and drinking practices 'champion' ○ early years professionals. **Component 5:** where is the intervention delivered: ○ during home visits ○ healthcare settings ○ community pharmacies ○ community venues ○ religious settings ○ nurseries/ play groups/ schools ○ other (report what type). • **Component 6:** behaviour change models, techniques and theories: ○ trans-theoretical model (stages change) ○ theory of planned behaviour ○ theory of reasoned action ○ health protection theory ○ protection motivation theory ○ social cognitive theory ○ perceptions of risk

Field	Content
	○ Other (report what type) ○ No theory mentioned.
Comparator	• Another intervention • Status quo/treatment as usual (as defined by study authors, includes no treatment) • Time (before and after)
Types of study to be included	Include published full-text papers: • systematic reviews of RCTs • parallel RCTs • if insufficient parallel RCTs*: ○ quasi-randomised controlled trials ○ non-randomised controlled trials/Prospective cohort studies ○ retrospective cohort studies ○ historically controlled studies ○ ecological studies (geographical) ○ controlled before-and-after studies (including before and after surveys). *Non-randomised studies will be considered for inclusion if insufficient RCT evidence is available for guideline decision making. Sufficiency will be judged taking into account factors including number/quality/sample size of RCTs, outcomes reported and availability of data from subgroups of interest. Conference abstracts will not be included because these do not typically have sufficient information to allow full critical appraisal.
Other exclusion criteria	Setting: • countries other than high income countries (as defined by the OECD). If any study or systematic review includes <1/3 of parents and carers or early years professionals who received any of the interventions in the above setting, it will be considered for inclusion but, if included, the evidence will be downgraded for indirectness. Intervention: • population-level interventions (for example, TV and online advertising).
Context	The population of this guideline may overlap with the population of women included in other NICE guidelines (such as postnatal care, antenatal care, pregnancy and complex social factors or obesity prevention).
Primary outcomes (critical outcomes)	Babies/children outcomes:

Field	Content
	• appropriate milk feeding (continued breastfeeding and avoidance of formula from age 1) • beverage intake (sugar sweetened and any other beverages except milk and water) • food and nutrient intake patterns, including fruits and vegetables and scores from validated scales, such as the Dietary Diversity Score (DSS) and Healthy Eating Index (HEI), diet quality indices (DQI) and Healthy Dietary Habits Index (HDHI) • babies or children's growth (length or BMI) • dental health.
Secondary outcomes (important outcomes)	• Use of cups and bottles • Changes in attitude, confidence and knowledge as part of parent/carer's intention to change behaviour
Data extraction (selection and coding)	All references identified by the searches and from other sources will be uploaded into EPPI and de-duplicated. Titles and abstracts of the retrieved citations will be screened to identify studies that potentially meet the inclusion criteria outlined in the review protocol. Duplicate screening will not be undertaken for this question. Full versions of the selected studies will be obtained for assessment. Studies that fail to meet the inclusion criteria once the full version has been checked will be excluded at this stage. Each study excluded after checking the full version will be listed, along with the reason for its exclusion. A standardised form will be used to extract data from studies. The following data will be extracted: study details (reference, country where study was carried out, type and dates), participant characteristics, inclusion and exclusion criteria, details of the interventions if relevant, setting and follow-up, relevant outcome data and source of funding. One reviewer will extract relevant data into a standardised form, and this will be quality assessed by a senior reviewer.
Risk of bias (quality) assessment	Quality assessment of individual studies will be performed using the following checklists: • ROBIS tool for systematic reviews • Cochrane RoB tool v.2 for RCTs and quasi-RCTs • Cochrane ROBINS-I tool for non-randomised (clinical) controlled trials and cohort studies • JBI checklist for prevalence studies • Effective Practice and Organisation of Care (EPOC) RoB Tool for before-and-after studies The quality assessment will be performed by one reviewer and this will be quality assessed by a senior reviewer.
Strategy for data synthesis	**Intervention review:** Quantitative findings will be formally summarised in the review. Where multiple studies report on the same outcome for the same comparison, meta-analyses will be conducted using Cochrane Review Manager software.

Field	Content
	A fixed effect meta-analysis will be conducted and data will be presented as risk ratios if possible or odds ratios when required (for example, if only available in this form in included studies) for dichotomous outcomes, and mean differences or standardised mean differences for continuous outcomes. Heterogeneity in the effect estimates of the individual studies will be assessed using the I^2 statistic. Alongside visual inspection of the point estimates and confidence intervals, I^2 values of greater than 50% and 80% will be considered as significant and very significant heterogeneity, respectively. Heterogeneity will be explored as appropriate using sensitivity analyses and pre-specified subgroup analyses. If heterogeneity cannot be explained through subgroup analysis then a random effects model will be used for meta-analysis, or the data will not be pooled. The confidence in the findings across all available evidence will be evaluated for each outcome using an adaptation of the 'Grading of Recommendations Assessment, Development and Evaluation (GRADE) toolbox' developed by the international GRADE working group: http://www.gradeworkinggroup.org/ **Minimally important differences:** • validated scales/continuous outcomes: published MIDs where available • all other outcomes & where published MIDs are not available: 0.8 and 1.25 for all relative dichotomous outcomes ; +/- 0.5x control group SD for continuous outcomes.

Analysis of subgroups	Evidence will be stratified by:
	• level of socioeconomic deprivation/parental education/parental age.
	
	Evidence will be subgrouped by the following only in the event that there is significant heterogeneity in outcomes:
	• geographical variation for example places without adequate provision of primary care (outside cities).
	• religion and cultural considerations
	• babies or children with disabilities and other physical and mental health conditions
	• babies and children with developmental problems
	• ethnicity:
	  ○ White/White British
	  ○ Asian/Asian British
	  ○ Black/African/Caribbean/Black British
	  ○ Mixed/Multiple ethnic groups
	  ○ other ethnic group.

Field	Content			
	Where evidence is stratified or subgrouped the committee will consider on a case by case basis if separate recommendations should be made for distinct groups. Separate recommendations may be made where there is evidence of a differential effect of interventions in distinct groups. If there is a lack of evidence in one group, the committee will consider, based on their experience, whether it is reasonable to extrapolate and assume the interventions will have similar effects in that group compared with others.			
Type and method of review	☒	Intervention		
	☐	Diagnostic		
	☐	Prognostic		
	☐	Qualitative		
	☐	Epidemiologic		
	☐	Service Delivery		
	☐	Other (please specify)		
Language	English			
Country	England			
Anticipated or actual start date	17/11/2022			
Anticipated completion date	22/11/2023			
Stage of review at time of this submission	Review stage		Started	Completed
	Preliminary searches		☐	☑
	Piloting of the study selection process		☐	☑
	Formal screening of search results against eligibility criteria		☐	☑
	Data extraction		☐	☑
	Risk of bias (quality) assessment		☐	☑
	Data analysis		☐	☑
Named contact	**5a. Named contact** National Institute for Health and Care Excellence (NICE)			

Field	Content
	5b. Named contact e-mail mandcnutrition@nice.org.uk **5c. Organisational affiliation of the review** National Institute for Health and Care Excellence (NICE)
Review team members	From the National Guideline Alliance: • senior Systematic Reviewer • systematic Reviewer
Funding sources/sponsor	This systematic review is being completed by the National Institute for Health and Care Excellence (NICE)
Conflicts of interest	All guideline committee members and anyone who has direct input into NICE guidelines (including the evidence review team and expert witnesses) must declare any potential conflicts of interest in line with NICE's code of practice for declaring and dealing with conflicts of interest. Any relevant interests, or changes to interests, will also be declared publicly at the start of each guideline committee meeting. Before each meeting, any potential conflicts of interest will be considered by the guideline committee Chair and a senior member of the development team. Any decisions to exclude a person from all or part of a meeting will be documented. Any changes to a member's declaration of interests will be recorded in the minutes of the meeting. Declarations of interests will be published with the final guideline.
Collaborators	Development of this systematic review will be overseen by an advisory committee who will use the review to inform the development of evidence-based recommendations in line with section 3 of Developing NICE guidelines: the manual. Members of the guideline committee are available on the NICE website: https://www.nice.org.uk/guidance/indevelopment/gid-ng10191
Other registration details	None
URL for published protocol	https://www.crd.york.ac.uk/PROSPERO/display_record.php?RecordID=376770
Dissemination plans	NICE may use a range of different methods to raise awareness of the guideline. These include standard approaches such as: • notifying registered stakeholders of publication • publicising the guideline through NICE's newsletter and alerts • issuing a press release or briefing as appropriate, posting news articles on the NICE website, using social media channels, and publicising the guideline within NICE.

Field	Content	
Keywords	Healthy eating and drinking, children under 5 years	
Details of existing review of same topic by same authors	Not applicable	
Current review status	☐	Ongoing
	☐	Completed but not published
	☒	Completed and published
	☐	Completed, published and being updated
	☐	Discontinued
Additional information	None	
Details of final publication	www.nice.org.uk	

BMI: body mass index; CDSR: Cochrane Database of Systematic Reviews; CENTRAL: Cochrane Central Register of Controlled Trials; CINAHL: Cumulated Index to Nursing and Allied Health Literature; GRADE: Grading of Recommendations Assessment, Development and Evaluation; HTA: Health Technology Assessment; MID: minimally important difference; NGA: National Guideline Alliance; NICE: National Institute for Health and Care Excellence; OECD: Organisation for Economic Co-operation and Development; PRESS: Pee Review of Electronic Search Strategies; RCT: randomised controlled trial; RoB: risk of bias; SD: standard deviation

Appendix B Literature search strategies

Literature search strategies for review question: What interventions are effective to promote healthy eating and drinking practices, including complementary feeding, in children from 12 months to 5 years (in line with government advice)?

This was a combined search to cover both this review and review question in evidence review N.

Effectiveness searches

Database: MEDLINE

Date of last search: 21/11/2022

#	Searches
1.	exp Parents/
2.	family relations/ or exp maternal behavior/ or exp parent-child relations/ or parenting/ or paternal behavior/ or Infant Care/
3.	(famil* or father* or husband* or mother* or partner* or spous* or maternal* or parent* or paternal* or grandparent* or care giver* or caregiver* or guardian*).ti,ab.
4.	exp Child/ or exp Infant/ or Minors/ or exp Pediatrics/ or pediatric nursing/
5.	(child* or baby or babies or boy? Or girl? Or infan* or juvenile? Or kid? Or kindergar* or minors or p?ediatric* or preschool* or schoolchild* or school age? Or toddler*).ti,ab.
6.	(child* or baby or babies or infan* or juvenile? Or kindergar* or p?ediatric* or schoolchild* or school age?).jw,nw.
7.	or/1-6
8.	Weaning/ or Infant Food/
9.	Child Nutritional Physiological Phenomena/ or Maternal Nutritional Physiological Phenomena/ or Infant Nutritional Physiological Phenomena/
10.	((complementary or supplement* or introduc*) adj2 (feed* or food*)).ti,ab.
11.	(((solid or baby or soft or finger or mash* or puree* or infant*) adj2 (food* or fruit* or veg*)) or solids or babyfood*).ti,ab.
12.	wean*.ti,ab.
13.	or/8-12
14.	Diet/ or Diet, Healthy/
15.	Feeding Behavior/
16.	Nutritive Value/ or Nutritional Requirements/ or Energy Intake/
17.	fruit/ or vegetables/
18.	((food* or feed* or diet* or nutrition* or nutritive or feed* or eating) adj4 (habit* or behavio* or attitude* or belief* or practice*)).ti,ab.
19.	((nutrition* or nutrient* or micronutrient* or micro-nutrient* or alimentary or diet* or energy or calorie* or fruit? Or vegetable?) adj4 (intake or consum* or requirement* or value*)).ti,ab.
20.	((health* or balance* or nutrition*) adj4 (food* or eat* or diet*)).ti,ab.
21.	family food*.ti,ab.
22.	sodium, dietary/ or sodium chloride, dietary/
23.	artificially sweetened beverages/ or sugar-sweetened beverages/ or carbonated beverages/
24.	(((salt* or sugar* or sodium) adj2 (intake or consum*)) or soda* or candy or chocolate* or sweet* or confection*).ti,ab.
25.	((soft or fizzy or sugar*) adj1 (drink* or beverage*)).ti,ab.
26.	or/14-25

#	Searches
27.	13 or 26
28.	7 and 27
29.	*Access to Information/ or *Information Centers/ or *Information Services/ or *Information Dissemination/ or *Information Seeking Behavior/ or *Communication/ or *Communications Media/ or *Consumer Health Information/ or exp *Health Information Management/ or *Health Communication/ or *Health Promotion/ or *Health Education/ or exp *Patient Education as Topic/ or *Patient Education Handout/ or *Pamphlets/ or *Posters as topic/ or *Audiovisual aids/ or *Books, illustrated/ or *Medical illustration/ or *Computers, Handheld/ or *Decision Support Systems, Clinical/ or *Internet/ or *Internet-Based Intervention/ or *Social Media/ or *Social Networking/ or *Mobile Applications/ or *Blogging/ or *Electronic Mail/ or exp *Cell phone/ or *Hotlines/ or *Telephone/ or *Teaching materials/
30.	((inform* or educat* or advice or support* or guid*) adj4 (access* or dissem* or model* or need* or program* or provid* or provision or requir* or shar* or service* or seek* or network* or centre* or center*)).ti.
31.	((medical or health or electronic or virtual) adj4 (inform* or educat* or support* or learn* or guid*)).ti.
32.	(app or apps or blog* or booklet* or brochure* or dvd* or ehealth* or e-health* or elearn* or e-learn* or email* or e-mail* or facebook or facetime or face time or forum* or handout* or hand-out* or helpline* or hotline* or internet* or ipad* or iphone* or leaflet* or myspace or online or magazine* or mobile phone* or newsletter* or online or pamphlet* or palm pilot* or personal digital assistant* or pocket pc* or podcast* or poster? Or skype* or smartphone* or smart phone* or social media or social network* or sms or text messag* or twitter or tweet* or video* or web* or wiki* or written or youtube*).ti.
33.	(mobile* adj2 app*).ti.
34.	*Therapy, Computer-Assisted/ or *Telemedicine/
35.	*Diet Therapy/ or *Behavior Therapy/ or *Empowerment/
36.	*health behavior/ or *health knowledge, attitudes, practice/
37.	((behavio* or diet* or nutrition*) adj2 (therap* or intervention* or modif* or change* or treat* or train* or support* or strateg* or program* or educat*)).ti.
38.	(health* adj2 (behavio* or belief*)).ti.
39.	role model*.ti.
40.	*Access to Healthy Foods/ or *Food Assistance/ or *Dietary Services/ or *Food Security/
41.	exp *Social Support/
42.	*social welfare/ or *child welfare/ or *infant welfare/
43.	((government* or federal or welfare or aid* or social security or relief) adj2 (advice or guid* or support* or sponsor* or service* or grant* or scheme* or program* or provide* or provision* or assist* or gift* or handout* or donat* or voucher* or subsid*)).ti.
44.	((food* or nutrition*) adj2 (aid* or program* or assist* or stamp* or supplement* or bank* or package* or secur*)).ti.
45.	((social* or communit*) adj2 (support* or intervention*)).ti.
46.	or/29-45
47.	28 and 46
48.	letter/
49.	editorial/
50.	news/
51.	exp historical article/
52.	Anecdotes as Topic/
53.	comment/
54.	case report/
55.	(letter or comment*).ti.
56.	or/48-55
57.	randomized controlled trial/ or random*.ti,ab.
58.	56 not 57

#	Searches
59.	animals/ not humans/
60.	exp Animals, Laboratory/
61.	exp Animal Experimentation/
62.	exp Models, Animal/
63.	exp Rodentia/
64.	(rat or rats or mouse or mice).ti.
65.	or/58-64
66.	47 not 65
67.	limit 66 to English language
68.	Meta-Analysis/
69.	Meta-Analysis as Topic/
70.	(meta analy* or metanaly* or metaanaly*).ti,ab.
71.	((systematic* or evidence*) adj2 (review* or overview*)).ti,ab.
72.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
73.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
74.	(search* adj4 literature).ab.
75.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
76.	cochrane.jw.
77.	or/68-76
78.	randomized controlled trial.pt.
79.	controlled clinical trial.pt.
80.	pragmatic clinical trial.pt.
81.	randomi#ed.ab.
82.	placebo.ab.
83.	drug therapy.fs.
84.	randomly.ab.
85.	trial.ab.
86.	groups.ab.
87.	or/78-86
88.	Clinical Trials as topic.sh.
89.	trial.ti.
90.	or/78-82,84,88-89
91.	67 and (77 or 90)
92.	Observational Studies as Topic/
93.	Observational Study/
94.	Epidemiologic studies/
95.	exp case control studies/
96.	exp Cohort Studies/
97.	Cross-Sectional Studies/
98.	Controlled Before-After Studies/
99.	Historically Controlled Study/
100.	Interrupted Time Series Analysis/
101.	Comparative Study.pt.
102.	case control$.tw.
103.	case series.tw.
104.	(cohort adj (study or studies)).tw.

#	Searches
105.	cohort analy$.tw.
106.	(follow up adj (study or studies)).tw.
107.	(observational adj (study or studies)).tw.
108.	longitudinal.tw.
109.	prospective.tw.
110.	retrospective.tw.
111.	cross sectional.tw.
112.	or/92-111
113.	67 and 112
114.	113 not 91
115.	afghanistan/ or africa/ or africa, northern/ or africa, central/ or africa, eastern/ or "africa south of the sahara"/ or africa, southern/ or africa, western/ or albania/ or algeria/ or andorra/ or angola/ or "antigua and barbuda"/ or argentina/ or armenia/ or azerbaijan/ or bahamas/ or bahrain/ or bangladesh/ or barbados/ or belize/ or benin/ or bhutan/ or bolivia/ or borneo/ or "bosnia and herzegovina"/ or botswana/ or brazil/ or brunei/ or bulgaria/ or burkina faso/ or burundi/ or cabo verde/ or cambodia/ or cameroon/ or central african republic/ or chad/ or exp china/ or comoros/ or congo/ or cote d'ivoire/ or croatia/ or cuba/ or "democratic republic of the congo"/ or cyprus/ or djibouti/ or dominica/ or dominican republic/ or ecuador/ or egypt/ or el salvador/ or equatorial guinea/ or eritrea/ or eswatini/ or ethiopia/ or fiji/ or gabon/ or gambia/ or "georgia (republic)"/ or ghana/ or grenada/ or guatemala/ or guinea/ or guinea-bissau/ or guyana/ or haiti/ or honduras/ or independent state of samoa/ or exp india/ or indian ocean islands/ or indochina/ or indonesia/ or iran/ or iraq/ or jamaica/ or jordan/ or kazakhstan/ or kenya/ or kosovo/ or kuwait/ or kyrgyzstan/ or laos/ or lebanon/ or liechtenstein/ or lesotho/ or liberia/ or libya/ or madagascar/ or malaysia/ or malawi/ or mali/ or malta/ or mauritania/ or mauritius/ or mekong valley/ or melanesia/ or micronesia/ or monaco/ or mongolia/ or montenegro/ or morocco/ or mozambique/ or myanmar/ or namibia/ or nepal/ or nicaragua/ or niger/ or nigeria/ or oman/ or pakistan/ or palau/ or exp panama/ or papua new guinea/ or paraguay/ or peru/ or philippines/ or qatar/ or "republic of belarus"/ or "republic of north macedonia"/ or romania/ or exp russia/ or rwanda/ or "saint kitts and nevis"/ or saint lucia/ or "saint vincent and the grenadines"/ or "sao tome and principe"/ or saudi arabia/ or serbia/ or sierra leone/ or senegal/ or seychelles/ or singapore/ or somalia/ or south africa/ or south sudan/ or sri lanka/ or sudan/ or suriname/ or syria/ or taiwan/ or tajikistan/ or tanzania/ or thailand/ or timor-leste/ or togo/ or tonga/ or "trinidad and tobago"/ or tunisia/ or turkmenistan/ or uganda/ or ukraine/ or united arab emirates/ or uruguay/ or uzbekistan/ or vanuatu/ or venezuela/ or vietnam/ or west indies/ or yemen/ or zambia/ or zimbabwe/
116.	"organisation for economic co-operation and development"/
117.	australasia/ or exp australia/ or austria/ or baltic states/ or belgium/ or exp canada/ or chile/ or colombia/ or costa rica/ or czech republic/ or exp denmark/ or estonia/ or europe/ or finland/ or exp france/ or exp germany/ or greece/ or hungary/ or iceland/ or ireland/ or israel/ or exp italy/ or exp japan/ or korea/ or latvia/ or lithuania/ or luxembourg/ or mexico/ or netherlands/ or new zealand/ or north america/ or exp norway/ or poland/ or portugal/ or exp "republic of korea"/ or "scandinavian and nordic countries"/ or slovakia/ or slovenia/ or spain/ or sweden/ or switzerland/ or turkey/ or exp united kingdom/ or exp united states/
118.	european union/
119.	developed countries/
120.	or/116-119
121.	115 not 120
122.	91 not 121
123.	114 not 121

Database: Embase

Date of last search: 21/11/2022

#	Searches
1.	exp parent/

#	Searches
2.	family relation/ or exp child parent relation/ or infant care/
3.	(famil* or father* or husband* or mother* or partner* or spous* or maternal* or parent* or paternal* or grandparent* or care giver* or caregiver* or guardian*).ti,ab.
4.	child/ or exp infant/ or preschool child/ or school child/ or toddler/ or "minor (person)"/
5.	pediatrics/ or child psychiatry/ or pediatric emergency medicine/ or pediatric nursing/
6.	(child* or baby or babies or boy? Or girl? Or infan* or juvenile? Or kid? Or kindergar* or minors or p?ediatric* or preschool* or schoolchild* or school age? Or toddler*).ti,ab.
7.	(child* or baby or babies or infan* or juvenile? Or kindergar* or p?ediatric* or schoolchild* or school age?).jw.
8.	or/1-7
9.	weaning/ or infant feeding/ or baby food/
10.	complementary feeding/
11.	child nutrition/ or maternal nutrition/ or infant nutrition/
12.	((complementary or supplement* or introduc*) adj2 (feed* or food*)).ti,ab.
13.	(((solid or baby or soft or finger or mash* or puree* or infant*) adj2 (food* or fruit* or veg*)) or solids or babyfood*).ti,ab.
14.	wean*.ti,ab.
15.	or/9-14
16.	diet/ or healthy diet/
17.	feeding behavior/ or eating habit/ or dietary pattern/
18.	nutritional value/
19.	nutritional requirement/
20.	food intake/ or energy consumption/
21.	dietary intake/ or caloric intake/ or exp nutrient intake/
22.	fruit/ or vegetable/
23.	vegetable consumption/
24.	((food* or feed* or diet* or nutrition* or nutritive or feed* or eating) adj4 (habit* or behavio* or attitude* or belief* or practice*)).ti,ab.
25.	((nutrition* or nutrient* or micronutrient* or micro-nutrient* or alimentary or diet* or energy or calorie* or fruit? Or vegetable?) adj4 (intake or consum* or requirement* or value*)).ti,ab.
26.	((health* or balance* or nutrition*) adj4 (food* or eat* or diet*)).ti,ab.
27.	family food*.ti,ab.
28.	sodium intake/ or salt intake/ or sodium restriction/ or high sodium intake/
29.	artificially sweetened beverage/ or sweetened beverage/ or sugar-sweetened beverage/ or sweetening agent/
30.	(((salt* or sugar* or sodium) adj2 (intake or consum*)) or soda* or candy or chocolate* or sweet* or confection*).ti,ab.
31.	((soft or fizzy or sugar*) adj1 (drink* or beverage*)).ti,ab.
32.	or/16-31
33.	15 or 32
34.	8 and 33
35.	*access to information/ or *information/ or *information center/ or *information service/ or *information dissemination/ or *information seeking/ or *help seeking behavior/ or *interpersonal communication/ or *communication/ or *consumer health information/ or *medical information system/ or *health promotion/ or *health education/ or *education program/ or *patient education/ or *patient information/ or *medical information/ or *publication/ or *visual information/ or *personal digital assistant/ or exp *decision support system/ or *patient decision making/ or *internet/ or *web-based intervention/ or *web browser/ or *social media/ or *blogging/ or *social network/ or *mobile application/ or *e-mail/ or *email support/ or *text messaging/ or *text messaging support/ or *hotline/ or *telephone/ or *telephone support/ or exp *mobile phone/ or *teleconsultation/ or exp *teaching/
36.	((inform* or educat* or advice or support* or guid*) adj4 (access* or dissem* or model* or need* or program* or provid* or provision or requir* or shar* or service* or seek* or network* or centre* or center*)).ti.
37.	((medical or health or electronic or virtual) adj4 (inform* or educat* or support* or learn* or guid*)).ti.
38.	(app or apps or blog* or booklet* or brochure* or dvd* or ehealth* or e-health* or elearn* or e-learn* or email* or e-mail* or facebook or facetime or face time or forum* or handout* or hand-out* or helpline* or hotline* or internet* or ipad* or iphone* or leaflet* or myspace or online or magazine* or mobile phone* or newsletter* or online or pamphlet* or palm pilot* or personal digital assistant* or pocket pc* or podcast* or poster? Or skype* or smartphone* or smart phone* or social media or social network* or sms or text messag* or twitter or tweet* or video* or web* or wiki* or written or youtube*).ti.
39.	(mobile* adj2 app*).ti.
40.	*computer assisted therapy/ or *telehealth/ or *telemedicine/
41.	*diet therapy/ or *behavior therapy/ or *empowerment/ or *lifestyle modification/

#	Searches
42.	*health behavior/ or *attitude to health/
43.	((behavio* or diet* or nutrition*) adj2 (therap* or intervention* or modif* or change* or treat* or train* or support* or strateg* or program* or educat*)).ti.
44.	(health* adj2 (behavio* or belief*)).ti.
45.	role model*.ti.
46.	*healthy food access/ or *food assistance/ or *dietary service/ or *food security/
47.	exp *social support/
48.	*social welfare/ or *child welfare/ or *infant welfare/
49.	((government* or federal or welfare or aid* or social security or relief) adj2 (advice or guid* or support* or sponsor* or service* or grant* or scheme* or program* or provide* or provision* or assist* or gift* or handout* or donat* or voucher* or subsid*)).ti.
50.	((food* or nutrition*) adj2 (aid* or program* or assist* or stamp* or supplement* or bank* or package* or secur*)).ti.
51.	((social* or communit*) adj2 (support* or intervention*)).ti.
52.	or/35-51
53.	34 and 52
54.	letter.pt. or letter/
55.	note.pt.
56.	editorial.pt.
57.	case report/ or case study/
58.	(letter or comment*).ti.
59.	or/54-58
60.	randomized controlled trial/ or random*.ti,ab.
61.	59 not 60
62.	animal/ not human/
63.	nonhuman/
64.	exp Animal Experiment/
65.	exp Experimental Animal/
66.	animal model/
67.	exp Rodent/
68.	(rat or rats or mouse or mice).ti.
69.	or/61-68
70.	53 not 69
71.	limit 70 to English language
72.	(conference abstract* or conference review or conference paper or conference proceeding).db,pt,su.
73.	71 not 72
74.	systematic review/
75.	meta-analysis/
76.	(meta analy* or metanaly* or metaanaly*).ti,ab.
77.	((systematic or evidence) adj2 (review* or overview*)).ti,ab.
78.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
79.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
80.	(search* adj4 literature).ab.
81.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
82.	((pool* or combined) adj2 (data or trials or studies or results)).ab.
83.	cochrane.jw.
84.	or/74-83
85.	random*.ti,ab.
86.	factorial*.ti,ab.
87.	(crossover* or cross over*).ti,ab.
88.	((doubl* or singl*) adj blind*).ti,ab.
89.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
90.	crossover procedure/

#	Searches
91.	single blind procedure/
92.	randomized controlled trial/
93.	double blind procedure/
94.	or/85-93
95.	73 and (84 or 94)
96.	Clinical study/
97.	Case control study/
98.	Family study/
99.	Longitudinal study/
100.	Retrospective study/
101.	comparative study/
102.	Prospective study/
103.	Randomized controlled trials/
104.	102 not 103
105.	Cohort analysis/
106.	cohort analy$.tw.
107.	(Cohort adj (study or studies)).tw.
108.	(Case control$ adj (study or studies)).tw.
109.	(follow up adj (study or studies)).tw.
110.	(observational adj (study or studies)).tw.
111.	(epidemiologic$ adj (study or studies)).tw.
112.	(cross sectional adj (study or studies)).tw.
113.	case series.tw.
114.	prospective.tw.
115.	retrospective.tw.
116.	or/96-101,104-115
117.	73 and 116
118.	117 not 95
119.	afghanistan/ or africa/ or "africa south of the sahara"/ or albania/ or algeria/ or andorra/ or angola/ or argentina/ or "antigua and barbuda"/ or armenia/ or exp azerbaijan/ or bahamas/ or bahrain/ or bangladesh/ or barbados/ or belarus/ or belize/ or benin/ or bhutan/ or bolivia/ or borneo/ or exp "bosnia and herzegovina"/ or botswana/ or exp brazil/ or brunei darussalam/ or bulgaria/ or burkina faso/ or burundi/ or cambodia/ or cameroon/ or cape verde/ or central africa/ or central african republic/ or chad/ or exp china/ or comoros/ or congo/ or cook islands/ or cote d'ivoire/ or croatia/ or cuba/ or cyprus/ or democratic republic congo/ or djibouti/ or dominica/ or dominican republic/ or ecuador/ or el salvador/ or egypt/ or equatorial guinea/ or eritrea/ or eswatini/ or ethiopia/ or exp "federated states of micronesia"/ or fiji/ or gabon/ or gambia/ or exp "georgia (republic)"/ or ghana/ or grenada/ or guatemala/ or guinea/ or guinea-bissau/ or guyana/ or haiti/ or honduras/ or exp india/ or exp indonesia/ or iran/ or exp iraq/ or jamaica/ or jordan/ or kazakhstan/ or kenya/ or kiribati/ or kosovo/ or kuwait/ or kyrgyzstan/ or laos/ or lebanon/ or liechtenstein/ or lesotho/ or liberia/ or libyan arab jamahiriya/ or madagascar/ or malawi/ or exp malaysia/ or maldives/ or mali/ or malta/ or mauritania/ or mauritius/ or melanesia/ or moldova/ or monaco/ or mongolia/ or "montenegro (republic)"/ or morocco/ or mozambique/ or myanmar/ or namibia/ or nauru/ or nepal/ or nicaragua/ or niger/ or nigeria/ or niue/ or north africa/ or oman/ or exp pakistan/ or palau/ or palestine/ or panama/ or papua new guinea/ or paraguay/ or peru/ or philippines/ or polynesia/ or qatar/ or "republic of north macedonia"/ or romania/ or exp russian federation/ or rwanda/ or sahel/ or "saint kitts and nevis"/ or "saint lucia"/ or "saint vincent and the grenadines"/ or saudi arabia/ or senegal/ or exp serbia/ or seychelles/ or sierra leone/ or singapore/ or "sao tome and principe"/ or solomon islands/ or exp somalia/ or south africa/ or south asia/ or south sudan/ or exp southeast asia/ or sri lanka/ or sudan/ or suriname/ or syrian arab republic/ or taiwan/ or tajikistan/ or tanzania/ or thailand/ or timor-leste/ or togo/ or tonga/ or "trinidad and tobago"/ or tunisia/ or turkmenistan/ or tuvalu/ or uganda/ or exp ukraine/ or exp united arab emirates/ or uruguay/ or exp uzbekistan/ or vanuatu/ or venezuela/ or viet nam/ or western sahara/ or yemen/ or zambia/ or zimbabwe/
120.	exp "organisation for economic co-operation and development"/
121.	exp australia/ or "australia and new zealand"/ or austria/ or baltic states/ or exp belgium/ or exp canada/ or chile/ or colombia/ or costa rica/ or czech republic/ or denmark/ or estonia/ or europe/ or exp finland/ or exp france/ or exp germany/ or greece/ or hungary/ or iceland/ or ireland/ or israel/ or exp italy/ or japan/ or korea/ or latvia/ or lithuania/ or luxembourg/ or exp mexico/ or netherlands/ or new zealand/ or north america/ or exp norway/ or poland/ or exp portugal/ or scandinavia/ or sweden/ or slovakia/ or slovenia/ or south korea/ or exp spain/ or switzerland/ or "Turkey (republic)"/ or exp united kingdom/ or exp united states/ or western europe/
122.	european union/
123.	developed country/
124.	or/120-123
125.	119 not 124

#	Searches
126.	95 not 125
127.	118 not 125

Database: Emcare

Date of last search: 24/11/2022

#	Searches
1.	exp parent/
2.	family relation/ or exp child parent relation/ or infant care/
3.	(famil* or father* or husband* or mother* or partner* or spous* or maternal* or parent* or paternal* or grandparent* or care giver* or caregiver* or guardian*).ti,ab.
4.	child/ or exp infant/ or preschool child/ or school child/ or toddler/ or "minor (person)"/
5.	pediatrics/ or child psychiatry/ or pediatric emergency medicine/ or pediatric nursing/
6.	(child* or baby or babies or boy? Or girl? Or infan* or juvenile? Or kid? Or kindergar* or minors or p?ediatric* or preschool* or schoolchild* or school age? Or toddler*).ti,ab.
7.	(child* or baby or babies or infan* or juvenile? Or kindergar* or p?ediatric* or schoolchild* or school age?).jw.
8.	or/1-7
9.	weaning/ or infant feeding/ or baby food/
10.	complementary feeding/
11.	child nutrition/ or maternal nutrition/ or infant nutrition/
12.	((complementary or supplement* or introduc*) adj2 (feed* or food*)).ti,ab.
13.	(((solid or baby or soft or finger or mash* or puree* or infant*) adj2 (food* or fruit* or veg*)) or solids or babyfood*).ti,ab.
14.	wean*.ti,ab.
15.	or/9-14
16.	diet/ or healthy diet/
17.	feeding behavior/ or eating habit/ or dietary pattern/
18.	nutritional value/
19.	nutritional requirement/
20.	food intake/ or energy consumption/
21.	dietary intake/ or caloric intake/ or exp nutrient intake/
22.	fruit/ or vegetable/
23.	vegetable consumption/
24.	((food* or feed* or diet* or nutrition* or nutritive or feed* or eating) adj4 (habit* or behavio* or attitude* or belief* or practice*)).ti,ab.
25.	((nutrition* or nutrient* or micronutrient* or micro-nutrient* or alimentary or diet* or energy or calorie* or fruit? Or vegetable?) adj4 (intake or consum* or requirement* or value*)).ti,ab.
26.	((health* or balance* or nutrition*) adj4 (food* or eat* or diet*)).ti,ab.
27.	family food*.ti,ab.
28.	sodium intake/ or salt intake/ or sodium restriction/ or high sodium intake/
29.	artificially sweetened beverage/ or sweetened beverage/ or sugar-sweetened beverage/ or sweetening agent/
30.	(((salt* or sugar* or sodium) adj2 (intake or consum*)) or soda* or candy or chocolate* or sweet* or confection*).ti,ab.
31.	((soft or fizzy or sugar*) adj1 (drink* or beverage*)).ti,ab.
32.	or/16-31
33.	15 or 32
34.	8 and 33
35.	*access to information/ or *information/ or *information center/ or *information service/ or *information dissemination/ or *information seeking/ or *help seeking behavior/ or *interpersonal communication/ or *communication/ or *consumer health information/ or *medical information system/ or *health promotion/ or *health education/ or *education program/ or *patient education/ or *patient information/ or *medical information/ or *publication/ or *visual information/ or *personal digital assistant/ or exp *decision support system/ or *patient decision making/ or *internet/ or *web-based intervention/ or *web browser/ or *social media/ or *blogging/ or *social network/ or *mobile application/ or *e-mail/ or *email support/ or *text messaging/ or *text messaging support/ or *hotline/ or *telephone/ or *telephone support/ or exp *mobile phone/ or *teleconsultation/ or exp *teaching/
36.	((inform* or educat* or advice or support* or guid*) adj4 (access* or dissem* or model* or need* or program* or provid* or provision or requir* or shar* or service* or seek* or network* or centre* or center*)).ti.
37.	((medical or health or electronic or virtual) adj4 (inform* or educat* or support* or learn* or guid*)).ti.

#	Searches
38.	(app or apps or blog* or booklet* or brochure* or dvd* or ehealth* or e-health* or elearn* or e-learn* or email* or e-mail* or facebook or facetime or face time or forum* or handout* or hand-out* or helpline* or hotline* or internet* or ipad* or iphone* or leaflet* or myspace or online or magazine* or mobile phone* or newsletter* or online or pamphlet* or palm pilot* or personal digital assistant* or pocket pc* or podcast* or poster? Or skype* or smartphone* or smart phone* or social media or social network* or sms or text messag* or twitter or tweet* or video* or web* or wiki* or written or youtube*).ti.
39.	(mobile* adj2 app*).ti.
40.	*computer assisted therapy/ or *telehealth/ or *telemedicine/
41.	*diet therapy/ or *behavior therapy/ or *empowerment/ or *lifestyle modification/
42.	*health behavior/ or *attitude to health/
43.	((behavio* or diet* or nutrition*) adj2 (therap* or intervention* or modif* or change* or treat* or train* or support* or strateg* or program* or educat*)).ti.
44.	(health* adj2 (behavio* or belief*)).ti.
45.	role model*.ti.
46.	*healthy food access/ or *food assistance/ or *dietary service/ or *food security/
47.	exp *social support/
48.	*social welfare/ or *child welfare/ or *infant welfare/
49.	((government* or federal or welfare or aid* or social security or relief) adj2 (advice or guid* or support* or sponsor* or service* or grant* or scheme* or program* or provide* or provision* or assist* or gift* or handout* or donat* or voucher* or subsid*)).ti.
50.	((food* or nutrition*) adj2 (aid* or program* or assist* or stamp* or supplement* or bank* or package* or secur*)).ti.
51.	((social* or communit*) adj2 (support* or intervention*)).ti.
52.	or/35-51
53.	34 and 52
54.	letter.pt. or letter/
55.	note.pt.
56.	editorial.pt.
57.	case report/ or case study/
58.	(letter or comment*).ti.
59.	or/54-58
60.	randomized controlled trial/ or random*.ti,ab.
61.	59 not 60
62.	animal/ not human/
63.	nonhuman/
64.	exp Animal Experiment/
65.	exp Experimental Animal/
66.	animal model/
67.	exp Rodent/
68.	(rat or rats or mouse or mice).ti.
69.	or/61-68
70.	53 not 69
71.	limit 70 to English language
72.	conference*.pt,su,so.
73.	71 not 72
74.	systematic review/
75.	meta-analysis/
76.	(meta analy* or metanaly* or metaanaly*).ti,ab.
77.	((systematic or evidence) adj2 (review* or overview*)).ti,ab.
78.	(reference list* or bibliograph* or hand search* or manual search* or relevant journals).ab.
79.	(search strategy or search criteria or systematic search or study selection or data extraction).ab.
80.	(search* adj4 literature).ab.
81.	(medline or pubmed or cochrane or embase or psychlit or psyclit or psychinfo or psycinfo or cinahl or science citation index or bids or cancerlit).ab.
82.	((pool* or combined) adj2 (data or trials or studies or results)).ab.
83.	cochrane.jw.
84.	or/74-83

#	Searches
85.	random*.ti,ab.
86.	factorial*.ti,ab.
87.	(crossover* or cross over*).ti,ab.
88.	((doubl* or singl*) adj blind*).ti,ab.
89.	(assign* or allocat* or volunteer* or placebo*).ti,ab.
90.	crossover procedure/
91.	single blind procedure/
92.	randomized controlled trial/
93.	double blind procedure/
94.	or/85-93
95.	73 and (84 or 94)
96.	Clinical study/
97.	Case control study/
98.	Family study/
99.	Longitudinal study/
100.	Retrospective study/
101.	comparative study/
102.	Prospective study/
103.	Randomized controlled trials/
104.	102 not 103
105.	Cohort analysis/
106.	cohort analy$.tw.
107.	(Cohort adj (study or studies)).tw.
108.	(Case control$ adj (study or studies)).tw.
109.	(follow up adj (study or studies)).tw.
110.	(observational adj (study or studies)).tw.
111.	(epidemiologic$ adj (study or studies)).tw.
112.	(cross sectional adj (study or studies)).tw.
113.	case series.tw.
114.	prospective.tw.
115.	retrospective.tw.
116.	or/96-101,104-115
117.	73 and 116
118.	117 not 95
119.	afghanistan/ or africa/ or "africa south of the sahara"/ or albania/ or algeria/ or andorra/ or angola/ or argentina/ or "antigua and barbuda"/ or armenia/ or exp azerbaijan/ or bahamas/ or bahrain/ or bangladesh/ or barbados/ or belarus/ or belize/ or benin/ or bhutan/ or bolivia/ or borneo/ or exp "bosnia and herzegovina"/ or botswana/ or exp brazil/ or brunei darussalam/ or bulgaria/ or burkina faso/ or burundi/ or cambodia/ or cameroon/ or cape verde/ or central africa/ or central african republic/ or chad/ or exp china/ or comoros/ or congo/ or cook islands/ or cote d'ivoire/ or croatia/ or cuba/ or cyprus/ or democratic republic congo/ or djibouti/ or dominica/ or dominican republic/ or ecuador/ or el salvador/ or egypt/ or equatorial guinea/ or eritrea/ or eswatini/ or ethiopia/ or exp "federated states of micronesia"/ or fiji/ or gabon/ or gambia/ or exp "georgia (republic)"/ or ghana/ or grenada/ or guatemala/ or guinea/ or guinea-bissau/ or guyana/ or haiti/ or honduras/ or exp india/ or exp indonesia/ or iran/ or exp iraq/ or jamaica/ or jordan/ or kazakhstan/ or kenya/ or kiribati/ or kosovo/ or kuwait/ or kyrgyzstan/ or laos/ or lebanon/ or liechtenstein/ or lesotho/ or liberia/ or libyan arab jamahiriya/ or madagascar/ or malawi/ or exp malaysia/ or maldives/ or mali/ or malta/ or mauritania/ or mauritius/ or melanesia/ or moldova/ or monaco/ or mongolia/ or "montenegro (republic)"/ or morocco/ or mozambique/ or myanmar/ or namibia/ or nauru/ or nepal/ or nicaragua/ or niger/ or nigeria/ or niue/ or north africa/ or oman/ or exp pakistan/ or palau/ or palestine/ or panama/ or papua new guinea/ or paraguay/ or peru/ or philippines/ or polynesia/ or qatar/ or "republic of north macedonia"/ or romania/ or exp russian federation/ or rwanda/ or sahel/ or "saint kitts and nevis"/ or "saint lucia"/ or "saint vincent and the grenadines"/ or saudi arabia/ or senegal/ or exp serbia/ or seychelles/ or sierra leone/ or singapore/ or "sao tome and principe"/ or solomon islands/ or exp somalia/ or south africa/ or south asia/ or south sudan/ or exp southeast asia/ or sri lanka/ or sudan/ or suriname/ or syrian arab republic/ or taiwan/ or tajikistan/ or tanzania/ or thailand/ or timor-leste/ or togo/ or tonga/ or "trinidad and tobago"/ or tunisia/ or turkmenistan/ or tuvalu/ or uganda/ or exp ukraine/ or exp united arab emirates/ or uruguay/ or exp uzbekistan/ or vanuatu/ or venezuela/ or viet nam/ or western sahara/ or yemen/ or zambia/ or zimbabwe/
120.	exp "organisation for economic co-operation and development"/
121.	exp australia/ or "australia and new zealand"/ or austria/ or baltic states/ or exp belgium/ or exp canada/ or chile/ or colombia/ or costa rica/ or czech republic/ or denmark/ or estonia/ or europe/ or exp finland/ or exp france/ or exp germany/ or greece/ or hungary/ or iceland/ or ireland/ or israel/ or exp italy/ or japan/ or korea/ or latvia/ or lithuania/ or luxembourg/ or exp mexico/ or netherlands/ or new zealand/ or north america/ or exp norway/ or poland/ or exp

#	Searches
	portugal/ or scandinavia/ or sweden/ or slovakia/ or slovenia/ or south korea/ or exp spain/ or switzerland/ or "Turkey (republic)"/ or exp united kingdom/ or exp united states/ or western europe/
122.	european union/
123.	developed country/
124.	or/120-123
125.	119 not 124
126.	95 not 125
127.	118 not 125

Database: Cochrane Database of Systematic Reviews Issue 11 of 12, November and Cochrane Central Register of Controlled Trials Issue 11 of 12, November

Date of last search: 21/11/2022

#	Searches
#1	MeSH descriptor: [Parents] explode all trees
#2	MeSH descriptor: [Family Relations] this term only
#3	MeSH descriptor: [Maternal Behavior] explode all trees
#4	MeSH descriptor: [Parent-Child Relations] explode all trees
#5	MeSH descriptor: [Parenting] this term only
#6	MeSH descriptor: [Paternal Behavior] this term only
#7	MeSH descriptor: [Infant Care] this term only
#8	(famil* or father* or husband* or mother* or partner* or spous* or maternal* or parent* or paternal* or grandparent* or care giver* or caregiver* or guardian*):ti,ab
#9	MeSH descriptor: [Child] explode all trees
#10	MeSH descriptor: [Infant] explode all trees
#11	MeSH descriptor: [Minors] this term only
#12	MeSH descriptor: [Pediatrics] explode all trees
#13	MeSH descriptor: [Pediatric Nursing] explode all trees
#14	(child* or baby or babies or boy? Or girl? Or infan* or juvenile? Or kid? Or kindergar* or minors or p?ediatric* or preschool* or schoolchild* or (school NEXT age?) or toddler*):ti,ab
#15	(child* or baby or babies or infan* or juvenile? Or kindergar* or p?ediatric* or schoolchild* or (school NEXT age?)):so
#16	{or #1-#15}
#17	MeSH descriptor: [Weaning] this term only
#18	MeSH descriptor: [Infant Food] this term only
#19	MeSH descriptor: [Child Nutritional Physiological Phenomena] this term only
#20	MeSH descriptor: [Maternal Nutritional Physiological Phenomena] this term only
#21	MeSH descriptor: [Infant Nutritional Physiological Phenomena] this term only
#22	((complementary or supplement* orintroduc*) near/2 (feed* or food*)):ti,ab
#23	(((solid or baby or soft or finger or mash* or puree* or infant*) near/2 (food* or fruit* or veg*)) or solids or babyfood*):ti,ab
#24	wean*:ti,ab
#25	{or #17-#24}
#26	MeSH descriptor: [Diet] this term only
#27	MeSH descriptor: [Diet, Healthy] this term only
#28	MeSH descriptor: [Feeding Behavior] this term only
#29	MeSH descriptor: [Nutritive Value] this term only
#30	MeSH descriptor: [Nutritional Requirements] this term only
#31	MeSH descriptor: [Energy Intake] this term only
#32	MeSH descriptor: [Fruit] this term only
#33	MeSH descriptor: [Vegetables] this term only
#34	((food* or feed* or diet* or nutrition* or nutritive or feed* or eating) near/4 (habit* or behavio* or attitude* or belief* or practice*)):ti,ab
#35	((nutrition* or nutrient* or micronutrient* or micro-nutrient* or alimentary or diet* or energy or calorie* or fruit? Or vegetable?) near/4 (intake or consum* or requirement* or value*)):ti,ab
#36	((health* or balance* or nutrition*) near/4 (food* or eat* or diet*)):ti,ab

#	Searches
#37	(family NEXT food*):ti,ab
#38	MeSH descriptor: [Sodium, Dietary] this term only
#39	MeSH descriptor: [Sodium Chloride, Dietary] this term only
#40	MeSH descriptor: [Artificially Sweetened Beverages] this term only
#41	MeSH descriptor: [Sugar-Sweetened Beverages] this term only
#42	MeSH descriptor: [Carbonated Beverages] this term only
#43	(((salt* or sugar* or sodium) near/2 (intake or consum*)) or soda* or candy or chocolate* or sweet* or confection*):ti,ab
#44	((soft or fizzy or sugar*) near/1 (drink* or beverage*)):ti,ab
#45	{or #26-#44}
#46	#25 or #45
#47	#16 and #46
#48	MeSH descriptor: [Access to Information] this term only
#49	MeSH descriptor: [Information Centers] this term only
#50	MeSH descriptor: [Information Services] this term only
#51	MeSH descriptor: [Information Dissemination] this term only
#52	MeSH descriptor: [Information Seeking Behavior] this term only
#53	MeSH descriptor: [Communication] this term only
#54	MeSH descriptor: [Communications Media] this term only
#55	MeSH descriptor: [Consumer Health Information] this term only
#56	MeSH descriptor: [Health Information Management] explode all trees
#57	MeSH descriptor: [Health Communication] this term only
#58	MeSH descriptor: [Health Promotion] this term only
#59	MeSH descriptor: [Health Education] this term only
#60	MeSH descriptor: [Patient Education as Topic] explode all trees
#61	MeSH descriptor: [Patient Education Handout] this term only
#62	MeSH descriptor: [Pamphlets] this term only
#63	MeSH descriptor: [Posters as Topic] this term only
#64	MeSH descriptor: [Audiovisual Aids] this term only
#65	MeSH descriptor: [Books, Illustrated] this term only
#66	MeSH descriptor: [Medical Illustration] this term only
#67	MeSH descriptor: [Computers, Handheld] explode all trees
#68	MeSH descriptor: [Decision Support Systems, Clinical] this term only
#69	MeSH descriptor: [Internet] this term only
#70	MeSH descriptor: [Internet-Based Intervention] this term only
#71	MeSH descriptor: [Social Media] this term only
#72	MeSH descriptor: [Social Networking] this term only
#73	MeSH descriptor: [Mobile Applications] this term only
#74	MeSH descriptor: [Blogging] explode all trees
#75	MeSH descriptor: [Electronic Mail] this term only
#76	MeSH descriptor: [Cell Phone] explode all trees
#77	MeSH descriptor: [Hotlines] this term only
#78	MeSH descriptor: [Telephone] this term only
#79	MeSH descriptor: [Teaching Materials] this term only
#80	((inform* or educat* or advice or support* or guid*) near/4 (access* or dissem* or model* or need* or program* or provid* or provision or requir* or shar* or service* or seek* or network* or centre* or center*)):ti
#81	((medical or health or electronic or virtual) near/4 (inform* or educat* or support* or learn* or guid*)):ti
#82	(app or apps or blog* or booklet* or brochure* or dvd* or ehealth* or e-health* or elearn* or e-learn* or email* or e-mail* or facebook or facetime or "face time" or forum* or handout* or hand-out* or helpline* or hotline* or internet* or ipad* or iphone* or leaflet* or myspace or online or magazine* or (mobile NEXT phone*) or newsletter* or online or pamphlet* or (palm NEXT pilot*) or (personal NEXT digital NEXT assistant*) or (pocket NEXT pc*) or podcast* or poster? Or skype* or smartphone* or (smart NEXT phone*) or "social media" or (social NEXT network*) or sms or (text NEXT messag*) or twitter or tweet* or video* or web* or wiki* or written or youtube*):ti
#83	(mobile* near/2 app*):ti

#	Searches
#84	MeSH descriptor: [Therapy, Computer-Assisted] this term only
#85	MeSH descriptor: [Telemedicine] this term only
#86	MeSH descriptor: [Diet Therapy] this term only
#87	MeSH descriptor: [Behavior Therapy] this term only
#88	MeSH descriptor: [Empowerment] this term only
#89	MeSH descriptor: [Health Behavior] this term only
#90	MeSH descriptor: [Health Knowledge, Attitudes, Practice] this term only
#91	((behavio* or diet* or nutrition*) near/2 (therap* or intervention* or modif* or change* or treat* or train* or support* or strateg* or program* or educat*)):ti
#92	((health*) near/2 (behavio* or belief*)):ti
#93	(role NEXT model*):ti
#94	MeSH descriptor: [Access to Healthy Foods] this term only
#95	MeSH descriptor: [Food Assistance] this term only
#96	MeSH descriptor: [Dietary Services] this term only
#97	MeSH descriptor: [Food Security] this term only
#98	MeSH descriptor: [Social Support] explode all trees
#99	MeSH descriptor: [Social Welfare] this term only
#100	MeSH descriptor: [Child Welfare] this term only
#101	MeSH descriptor: [Infant Welfare] this term only
#102	((government* or federal or welfare or aid* or "social security" or relief) near/2 (advice or guid* or support* or sponsor* or service* or grant* or scheme* or program* or provide* or provision* or assist* or gift* or handout* or donat* or voucher* or subsid*)):ti
#103	((food* or nutrition*) near/2 (aid* or program* or assist* or stamp* or supplement* or bank* or package* or secur*)):ti
#104	((social* or communit*) near/2 (support* or intervention*)):ti
#105	{or #48-#104}
#106	#47 and #105
#107	"conference":pt or (clinicaltrials or trialsearch):so
#108	#106 NOT #107
#109	#108 in Cochrane Reviews
#110	#108 in Trials

Database: CINAHL

Date of last search: 21/11/2022

#	Searches
1	(MH "Parents+")
2	(MH "Family Relations")
3	(MH "Maternal Behavior")
4	(MH "Parent-Child Relations+")
5	(MH "Parenting")
6	(MH "Paternal Behavior")
7	(MH "Infant Care")
8	TI ((famil* or father* or husband* or mother* or partner* or spous* or maternal* or parent* or paternal* or grandparent* or care giver* or caregiver* or guardian*)) OR AB ((famil* or father* or husband* or mother* or partner* or spous* or maternal* or parent* or paternal* or grandparent* or care giver* or caregiver* or guardian*))
9	(MH "Child+")
10	(MH "Infant+")
11	(MH "Minors (Legal)")
12	(MH "Pediatrics+")
13	(MH "Pediatric Nursing")
14	TI ((child* or baby or babies or boy? Or girl? Or infan* or juvenile? Or kid? Or kindergar* or minors or p?ediatric* or preschool* or schoolchild* or school age? Or toddler*)) OR AB ((child* or baby or babies or boy? Or girl? Or infan* or juvenile? Or kid? Or kindergar* or minors or p?ediatric* or preschool* or schoolchild* or school age? Or toddler*))
15	S1 OR S2 OR S3 OR S4 OR S5 OR S6 OR S7 OR S8 OR S9 OR S10 OR S11 OR S12 OR S13 OR S14

#	Searches
16	(MH "Infant Weaning")
17	(MH "Infant Food")
18	(MH "Child Nutritional Physiology")
19	(MH "Maternal Nutritional Physiology")
20	(MH "Infant Nutritional Physiology")
21	TI (((complementary or supplement* or introduc*) N2 (feed* or food*))) OR AB (((complementary or supplement* or introduc*) N2 (feed* or food*)))
22	TI ((((solid or baby or soft or finger or mash* or puree* or infant*) N2 (food* or fruit* or veg*)) or solids or babyfood*)) OR AB ((((solid or baby or soft or finger or mash* or puree* or infant*) N2 (food* or fruit* or veg*)) or solids or babyfood*))
23	TI wean* OR AB wean*
24	S16 OR S17 OR S18 OR S19 OR S20 OR S21 OR S22 OR S23
25	(MH "Diet")
26	(MH "Eating Behavior")
27	(MH "Nutritive Value")
28	(MH "Nutritional Requirements")
29	(MH "Energy Intake")
30	(MH "Fruit")
31	(MH "Vegetables")
32	TI (((food* or feed* or diet* or nutrition* or nutritive or feed* or eating) N4 (habit* or behavio* or attitude* or belief* or practice*))) OR AB (((food* or feed* or diet* or nutrition* or nutritive or feed* or eating) N4 (habit* or behavio* or attitude* or belief* or practice*)))
33	TI (((nutrition* or nutrient* or micronutrient* or micro-nutrient* or alimentary or diet* or energy or calorie* or fruit? Or vegetable?) N4 (intake or consum* or requirement* or value*))) OR AB (((nutrition* or nutrient* or micronutrient* or micro-nutrient* or alimentary or diet* or energy or calorie* or fruit? Or vegetable?) N4 (intake or consum* or requirement* or value*)))
34	TI (((health* or balance* or nutrition*) N4 (food* or eat* or diet*))) OR AB (((health* or balance* or nutrition*) N4 (food* or eat* or diet*)))
35	TI family food* OR AB family food*
36	(MH "Sodium, Dietary")
37	(MH "Sodium Chloride, Dietary")
38	(MH "Sweetened Beverages")
39	(MH "Carbonated Beverages")
40	TI ((((salt* or sugar* or sodium) N2 (intake or consum*)) or soda* or candy or chocolate* or sweet* or confection*)) OR AB ((((salt* or sugar* or sodium) N2 (intake or consum*)) or soda* or candy or chocolate* or sweet* or confection*))
41	TI (((soft or fizzy or sugar*) N1 (drink* or beverage*))) OR AB (((soft or fizzy or sugar*) N1 (drink* or beverage*)))
42	S25 OR S26 OR S27 OR S28 OR S29 OR S30 OR S31 OR S32 OR S33 OR S34 OR S35 OR S36 OR S37 OR S38 OR S39 OR S40 OR S41
43	S24 OR S42
44	S15 AND S43
45	(MM "Access to Information")
46	(MM "Information Centers")
47	(MM "Information Services")
48	(MM "Information Seeking Behavior")
49	(MM "Communication")
50	(MM "Communications Media")
51	(MM "Consumer Health Information")
52	(MM "Health Information Management")
53	(MM "Health Promotion")
54	(MM "Health Education")
55	(MM "Patient Education")
56	(MM "Pamphlets")
57	(MM "Posters")
58	(MM "Audiovisuals")
59	(MM "Medical Illustration")

#	Searches
60	(MM "Computers, Hand-Held+")
61	(MM "Decision Support Systems, Clinical")
62	(MM "Internet")
63	(MM "Internet-Based Intervention")
64	(MM "Social Media")
65	(MM "Social Networking")
66	(MM "Mobile Applications")
67	(MM "Blogs")
68	(MM "Email")
69	(MM "Cellular Phone+")
70	(MM "Telephone Information Services")
71	(MM "Telephone")
72	(MM "Teaching Materials")
73	TI ((inform* or educat* or advice or support* or guid*) N4 (access* or dissem* or model* or need* or program* or provid* or provision or requir* or shar* or service* or seek* or network* or centre* or center*))
74	TI ((medical or health or electronic or virtual) N4 (inform* or educat* or support* or learn* or guid*))
75	TI (app or apps or blog* or booklet* or brochure* or dvd* or ehealth* or e-health* or elearn* or e-learn* or email* or e-mail* or facebook or facetime or face time or forum* or handout* or hand-out* or helpline* or hotline* or internet* or ipad* or iphone* or leaflet* or myspace or online or magazine* or mobile phone* or newsletter* or online or pamphlet* or palm pilot* or personal digital assistant* or pocket pc* or podcast* or poster? Or skype* or smartphone* or smart phone* or social media or social network* or sms or text messag* or twitter or tweet* or video* or web* or wiki* or written or youtube*)
76	TI (mobile* N2 app*)
77	(MM "Therapy, Computer Assisted")
78	(MM "Telemedicine")
79	(MM "Diet Therapy")
80	(MM "Behavior Therapy")
81	(MM "Empowerment")
82	(MM "Health Behavior")
83	(MM "Attitude to Health+")
84	TI ((behavio* or diet* or nutrition*) N2 (therap* or intervention* or modif* or change* or treat* or train* or support* or strateg* or program* or educat*))
85	TI (health* N2 (behavio* or belief*))
86	TI role model*
87	(MM "Access to Healthy Foods")
88	(MM "Food Assistance")
89	(MM "Nutrition Services")
90	(MM "Food Security")
91	(MM "Support, Social+")
92	(MM "Social Welfare")
93	(MM "Child Welfare")
94	TI ((government* or federal or welfare or aid* or social security or relief) N2 (advice or guid* or support* or sponsor* or service* or grant* or scheme* or program* or provide* or provision* or assist* or gift* or handout* or donat* or voucher* or subsid*))
95	TI ((food* or nutrition*) N2 (aid* or program* or assist* or stamp* or supplement* or bank* or package* or secur*))
96	TI ((social* or communit*) N2 (support* or intervention*))
97	S45 OR S46 OR S47 OR S48 OR S49 OR S50 OR S51 OR S52 OR S53 OR S54 OR S55 OR S56 OR S57 OR S58 OR S59 OR S60 OR S61 OR S62 OR S63 OR S64 OR S65 OR S66 OR S67 OR S68 OR S69 OR S70 OR S71 OR S72 OR S73 OR S74 OR S75 OR S76 OR S77 OR S78 OR S79 OR S80 OR S81 OR S82 OR S83 OR S84 OR S85 OR S86 OR S87 OR S88 OR S89 OR S90 OR S91 OR S92 OR S93 OR S94 OR S95 OR S96
98	S42 AND S97 Limiters - English Language; Exclude MEDLINE records; Human; Geographic Subset: Australia & New Zealand, Canada, Continental Europe, Europe, UK & Ireland, USA
99	PT (anecdote or audiovisual or bibliography or biography or book or book review or brief item or cartoon or commentary or computer program or editorial or games or glossary or historical material or interview or letter or listservs or masters thesis or obituary or pamphlet or pamphlet chapter or pictorial or poetry or proceedings or “questions and answers” or response or software or teaching materials or website)
100	S98 NOT S99

#	Searches
101	S100 Limiters - Publication Type: Randomized Controlled Trial, Systematic Review
102	(MH "Nonexperimental Studies+") OR (MH "Observational methods") OR (MH "Epidemiological Research") OR (MH "Case Control Studies+") OR (MH "Prospective Studies+") OR (MH "Cross Sectional Studies") OR (MH "Controlled Before-After Studies") OR (MH "Historically Controlled Study") OR (MH "Interrupted Time Series Analysis")
103	TI case control* OR AB case control*
104	TI case series OR AB case series
105	TI ((cohort N1 (study or studies))) OR AB ((cohort N1 (study or studies)))
106	TI cohort analy* OR AB cohort analy*
107	TI ((follow up N1 (study or studies))) OR AB ((follow up N1 (study or studies)))
108	TI ((observational N1 (study or studies))) OR AB ((observational N1 (study or studies)))
109	TI longitudinal OR AB longitudinal
110	TI prospective OR AB prospective
111	TI retrospective OR AB retrospective
112	TI cross sectional OR AB cross sectional
113	S102 OR S103 OR S104 OR S105 OR S106 OR S107 OR S108 OR S109 OR S110 OR S111 OR S112
114	S100 AND S113
115	S114 NOT S101

Database: Epistemonikos

Date of last search: 21/11/2022

Search 1:

#	Searches
1	Title/Abstract: (famil* OR father* OR husband* OR mother* OR partner* OR spous* OR maternal* OR parent* OR paternal* OR grandparent* OR "care giver" OR "care givers" OR caregiver* OR guardian* OR child* OR baby OR babies OR boy* OR girl* OR infan* OR juvenile* OR kid* OR kindergar* OR minors OR pediatric* OR paediatric* OR preschool* OR schoolchild* OR "school age" OR "school aged" OR toddler*)
2	Title/Abstract: (((complementary OR supplement* OR introduc*) AND (feed* or food*)) OR “solid food” OR solids OR wean*)
3	Title: (inform* OR educat* OR support* OR learn* OR guid* OR advice OR government* OR behavio* OR therap* OR intervention* OR modif* OR change* OR treat* OR train* OR support* OR strateg* OR program* OR support* OR communicat* OR aid* OR assist* OR "food stamp" OR "food supplement" OR "food bank" OR "food package" OR "food security")
4	1 AND 2 AND 3
5	Filter - Publication Type - Systematic Review

Search 2:

#	Searches
1	Title/Abstract: (famil* OR father* OR husband* OR mother* OR partner* OR spous* OR maternal* OR parent* OR paternal* OR grandparent* OR "care giver" OR "care givers" OR caregiver* OR guardian* OR child* OR baby OR babies OR boy* OR girl* OR infan* OR juvenile* OR kid* OR kindergar* OR minors OR pediatric* OR paediatric* OR preschool* OR schoolchild* OR "school age" OR "school aged" OR toddler*)
2	Title: (((food* OR feed* OR diet* OR nutrition* OR nutritive OR feed* OR eating) AND (habit* OR behavio* OR attitude* OR belief* OR practice*)) OR ((nutrition* OR nutrient* OR micronutrient* OR "micro-nutrient" OR "micro-nutrients" OR alimentary OR diet* OR energy OR calorie* OR fruit* OR vegetable*) AND (intake OR consum* OR requirement* OR value*)) OR ((health* OR balance* OR nutrition*) AND (food* OR eat* OR diet*)) OR salt* OR sugar* OR sodium OR soda* OR candy OR chocolate* OR sweet* OR confection* OR ((soft OR Fizzy) AND (drink* OR beverage*)))
3	Title: (inform* OR educat* OR support* OR learn* OR guid* OR advice OR government* OR behavio* OR therap* OR intervention* OR modif* OR change* OR treat* OR train* OR support* OR strateg* OR program* OR support* OR communicat* OR aid* OR assist* OR "food stamp" OR "food supplement" OR "food bank" OR "food package" OR "food security")
4	1 AND 2 AND 3

#	Searches
5	Filter - Publication Type - Systematic Review

Economic searches

Database: MEDLINE

Date of last search: 21/11/2022

#	Searches
1	exp Parents/
2	family relations/ or exp maternal behavior/ or exp parent-child relations/ or parenting/ or paternal behavior/ or Infant Care/
3	(famil* or father* or husband* or mother* or partner* or spous* or maternal* or parent* or paternal* or grandparent* or care giver* or caregiver* or guardian*).ti,ab.
4	exp Child/ or exp Infant/ or Minors/ or exp Pediatrics/ or pediatric nursing/
5	(child* or baby or babies or boy? Or girl? Or infan* or juvenile? Or kid? Or kindergar* or minors or p?ediatric* or preschool* or schoolchild* or school age? Or toddler*).ti,ab.
6	(child* or baby or babies or infan* or juvenile? Or kindergar* or p?ediatric* or schoolchild* or school age?).jw,nw.
7	or/1-6
8	Weaning/ or Infant Food/
9	Child Nutritional Physiological Phenomena/ or Maternal Nutritional Physiological Phenomena/ or Infant Nutritional Physiological Phenomena/
10	((complementary or supplement* or introduc*) adj2 (feed* or food*)).ti,ab.
11	(((solid or baby or soft or finger or mash* or puree* or infant*) adj2 (food* or fruit* or veg*)) or solids or babyfood*).ti,ab.
12	wean*.ti,ab.
13	or/8-12
14	Diet/ or Diet, Healthy/
15	Feeding Behavior/
16	Nutritive Value/ or Nutritional Requirements/ or Energy Intake/
17	fruit/ or vegetables/
18	((food* or feed* or diet* or nutrition* or nutritive or feed* or eating) adj4 (habit* or behavio* or attitude* or belief* or practice*)).ti,ab.
19	((nutrition* or nutrient* or micronutrient* or micro-nutrient* or alimentary or diet* or energy or calorie* or fruit? Or vegetable?) adj4 (intake or consum* or requirement* or value*)).ti,ab.
20	((health* or balance* or nutrition*) adj4 (food* or eat* or diet*)).ti,ab.
21	family food*.ti,ab.
22	sodium, dietary/ or sodium chloride, dietary/
23	artificially sweetened beverages/ or sugar-sweetened beverages/ or carbonated beverages/
24	(((salt* or sugar* or sodium) adj2 (intake or consum*)) or soda* or candy or chocolate* or sweet* or confection*).ti,ab.
25	((soft or fizzy or sugar*) adj1 (drink* or beverage*)).ti,ab.
26	or/14-25
27	13 or 26
28	7 and 27
29	*Access to Information/ or *Information Centers/ or *Information Services/ or *Information Dissemination/ or *Information Seeking Behavior/ or *Communication/ or *Communications Media/ or *Consumer Health Information/ or exp *Health Information Management/ or *Health Communication/ or *Health Promotion/ or *Health Education/ or exp *Patient Education as Topic/ or *Patient Education Handout/ or *Pamphlets/ or *Posters as topic/ or *Audiovisual aids/ or *Books, illustrated/ or *Medical illustration/ or *Computers, Handheld/ or *Decision Support Systems, Clinical/ or *Internet/ or *Internet-Based Intervention/ or *Social Media/ or *Social Networking/ or *Mobile Applications/ or *Blogging/ or *Electronic Mail/ or exp *Cell phone/ or *Hotlines/ or *Telephone/ or *Teaching materials/
30	((inform* or educat* or advice or support* or guid*) adj4 (access* or dissem* or model* or need* or program* or provid* or provision or requir* or shar* or service* or seek* or network* or centre* or center*)).ti.
31	((medical or health or electronic or virtual) adj4 (inform* or educat* or support* or learn* or guid*)).ti.
32	(app or apps or blog* or booklet* or brochure* or dvd* or ehealth* or e-health* or elearn* or e-learn* or email* or e-mail* or facebook or facetime or face time or forum* or handout* or hand-out* or helpline* or hotline* or internet* or ipad* or iphone* or leaflet* or myspace or online or magazine* or mobile phone* or newsletter* or online or pamphlet* or palm pilot* or personal digital assistant* or pocket pc* or podcast* or poster? Or skype* or smartphone*

#	Searches
	or smart phone* or social media or social network* or sms or text messag* or twitter or tweet* or video* or web* or wiki* or written or youtube*).ti.
33	(mobile* adj2 app*).ti.
34	*Therapy, Computer-Assisted/ or *Telemedicine/
35	*Diet Therapy/ or *Behavior Therapy/ or *Empowerment/
36	*health behavior/ or *health knowledge, attitudes, practice/
37	((behavio* or diet* or nutrition*) adj2 (therap* or intervention* or modif* or change* or treat* or train* or support* or strateg* or program* or educat*)).ti.
38	(health* adj2 (behavio* or belief*)).ti.
39	role model*.ti.
40	*Access to Healthy Foods/ or *Food Assistance/ or *Dietary Services/ or *Food Security/
41	exp *Social Support/
42	*social welfare/ or *child welfare/ or *infant welfare/
43	((government* or federal or welfare or aid* or social security or relief) adj2 (advice or guid* or support* or sponsor* or service* or grant* or scheme* or program* or provide* or provision* or assist* or gift* or handout* or donat* or voucher* or subsid*)).ti.
44	((food* or nutrition*) adj2 (aid* or program* or assist* or stamp* or supplement* or bank* or package* or secur*)).ti.
45	((social* or communit*) adj2 (support* or intervention*)).ti.
46	or/29-45
47	28 and 46
48	letter/
49	editorial/
50	news/
51	exp historical article/
52	Anecdotes as topic/
53	comment/
54	case reports/
55	(letter or comment*).ti.
56	or/48-55
57	randomized controlled trial/ or random*.ti,ab.
58	56 not 57
59	animals/ not humans/
60	exp Animals, Laboratory/
61	exp Animal Experimentation/
62	exp Models, Animal/
63	exp Rodentia/
64	(rat or rats or rodent* or mouse or mice).ti.
65	or/58-64
66	47 not 65
67	limit 66 to English language
68	Economics/
69	Value of life/
70	exp "Costs and Cost Analysis"/
71	exp Economics, Hospital/
72	exp Economics, Medical/
73	exp Resource Allocation/
74	Economics, Nursing/
75	Economics, Pharmaceutical/
76	exp "Fees and Charges"/
77	exp Budgets/
78	budget*.ti,ab.
79	cost*.ti,ab.
80	(economic* or pharmaco?economic*).ti,ab.
81	(price* or pricing*).ti,ab.

#	Searches
82	(financ* or fee or fees or expenditure* or saving*).ti,ab.
83	(value adj2 (money or monetary)).ti,ab.
84	resourc* allocat*.ti,ab.
85	(fund or funds or funding* or funded).ti,ab.
86	(ration or rations or rationing* or rationed).ti,ab.
87	ec.fs.
88	or/68-87
89	exp models, economic/
90	*Models, Theoretical/
91	*Models, Organizational/
92	msrkov chains/
93	monte carlo method/
94	exp Decision Theory/
95	(markov* or monte carlo).ti,ab.
96	econom* model*.ti,ab.
97	(decision* adj2 (tree* or analy* or model*)).ti,ab.
98	or/89-97
99	quality-adjusted life years/
100	sickness impact profile/
101	(quality adj2 (wellbeing or well being)).ti,ab.
102	sickness impact profile.ti,ab.
103	disability adjusted life.ti,ab.
104	(qal* or qtime* or qwb* or daly*).ti,ab.
105	(euroqol* or eq5d* or eq 5*).ti,ab.
106	(qol* or hql* or hqol* or h qol* or hrqol* or hr qol*).ti,ab.
107	(health utility* or utility score* or disutilit* or utility value*).ti,ab.
108	(hui or hui1 or hui2 or hui3).ti,ab.
109	(health* year* equivalent* or hye or hyes).ti,ab.
110	discrete choice*.ti,ab.
111	rosser.ti,ab.
112	(willingness to pay or time tradeoff or time trade off or tto or standard gamble*).ti,ab.
113	(sf36* or sf 36* or short form 36* or shortform 36* or shortform36*).ti,ab.
114	(sf20 or sf 20 or short form 20 or shortform 20 or shortform20).ti,ab.
115	(sf12* or sf 12* or short form 12* or shortform 12* or shortform12*).ti,ab.
116	(sf8* or sf 8* or short form 8* or shortform 8* or shortform8*).ti,ab.
117	(sf6* or sf 6* or short form 6* or shortform 6* or shortform6*).ti,ab.
118	or/99-117
119	67 and (88 or 98 or 118)

Database: Embase

Date of last search: 21/11/2022

#	Searches
1	exp parent/
2	family relation/ or exp child parent relation/ or infant care/
3	(famil* or father* or husband* or mother* or partner* or spous* or maternal* or parent* or paternal* or grandparent* or care giver* or caregiver* or guardian*).ti,ab.
4	child/ or exp infant/ or preschool child/ or school child/ or toddler/ or “minor (person)”/
5	pediatrics/ or child psychiatry/ or pediatric emergency medicine/ or pediatric nursing/
6	(child* or baby or babies or boy? Or girl? Or infan* or juvenile? Or kid? Or kindergar* or minors or p?ediatric* or preschool* or schoolchild* or school age? Or toddler*).ti,ab.
7	(child* or baby or babies or infan* or juvenile? Or kindergar* or p?ediatric* or schoolchild* or school age?).jw.
8	or/1-7

#	Searches
9	weaning/ or infant feeding/ or baby food/
10	complementary feeding/
11	child nutrition/ or maternal nutrition/ or infant nutrition/
12	((complementary or supplement* or introduc*) adj2 (feed* or food*)).ti,ab.
13	(((solid or baby or soft or finger or mash* or puree* or infant*) adj2 (food* or fruit* or veg*)) or solids or babyfood*).ti,ab.
14	wean*.ti,ab.
15	or/9-14
16	diet/ or healthy diet/
17	feeding behavior/ or eating habit/ or dietary pattern/
18	nutritional value/
19	nutritional requirement/
20	food intake/ or energy consumption/
21	dietary intake/ or caloric intake/ or exp nutrient intake/
22	fruit/ or vegetable/
23	vegetable consumption/
24	((food* or feed* or diet* or nutrition* or nutritive or feed* or eating) adj4 (habit* or behavio* or attitude* or belief* or practice*)).ti,ab.
25	((nutrition* or nutrient* or micronutrient* or micro-nutrient* or alimentary or diet* or energy or calorie* or fruit? Or vegetable?) adj4 (intake or consum* or requirement* or value*)).ti,ab.
26	((health* or balance* or nutrition*) adj4 (food* or eat* or diet*)).ti,ab.
27	family food*.ti,ab.
28	sodium intake/ or salt intake/ or sodium restriction/ or high sodium intake/
29	artificially sweetened beverage/ or sweetened beverage/ or sugar-sweetened beverage/ or sweetening agent/
30	(((salt* or sugar* or sodium) adj2 (intake or consum*)) or soda* or candy or chocolate* or sweet* or confection*).ti,ab.
31	((soft or fizzy or sugar*) adj1 (drink* or beverage*)).ti,ab.
32	or/16-31
33	15 or 32
34	8 and 33
35	*access to information/ or *information/ or *information center/ or *information service/ or *information dissemination/ or *information seeking/ or *help seeking behavior/ or *interpersonal communication/ or *communication/ or *consumer health information/ or *medical information system/ or *health promotion/ or *health education/ or *education program/ or *patient education/ or *patient information/ or *medical information/ or *publication/ or *visual information/ or *personal digital assistant/ or exp *decision support system/ or *patient decision making/ or *internet/ or *web-based intervention/ or *web browser/ or *social media/ or *blogging/ or *social network/ or *mobile application/ or *e-mail/ or *email support/ or *text messaging/ or *text messaging support/ or *hotline/ or *telephone/ or *telephone support/ or exp *mobile phone/ or *teleconsultation/ or exp *teaching/
36	((inform* or educat* or advice or support* or guid*) adj4 (access* or dissem* or model* or need* or program* or provid* or provision or requir* or shar* or service* or seek* or network* or centre* or center*)).ti.
37	((medical or health or electronic or virtual) adj4 (inform* or educat* or support* or learn* or guid*)).ti.
38	(app or apps or blog* or booklet* or brochure* or dvd* or ehealth* or e-health* or elearn* or e-learn* or email* or e-mail* or facebook or facetime or face time or forum* or handout* or hand-out* or helpline* or hotline* or internet* or ipad* or iphone* or leaflet* or myspace or online or magazine* or mobile phone* or newsletter* or online or pamphlet* or palm pilot* or personal digital assistant* or pocket pc* or podcast* or poster? Or skype* or smartphone* or smart phone* or social media or social network* or sms or text messag* or twitter or tweet* or video* or web* or wiki* or written or youtube*).ti.
39	(mobile* adj2 app*).ti.
40	*computer assisted therapy/ or *telehealth/ or *telemedicine/
41	*diet therapy/ or *behavior therapy/ or *empowerment/ or *lifestyle modification/
42	*health behavior/ or *attitude to health/
43	((behavio* or diet* or nutrition*) adj2 (therap* or intervention* or modif* or change* or treat* or train* or support* or strateg* or program* or educat*)).ti.
44	(health* adj2 (behavio* or belief*)).ti.
45	role model*.ti.
46	*healthy food access/ or *food assistance/ or *dietary service/ or *food security/
47	exp *social support/
48	*social welfare/ or *child welfare/ or *infant welfare/

#	Searches
49	((government* or federal or welfare or aid* or social security or relief) adj2 (advice or guid* or support* or sponsor* or service* or grant* or scheme* or program* or provide* or provision* or assist* or gift* or handout* or donat* or voucher* or subsid*)).ti.
50	((food* or nutrition*) adj2 (aid* or program* or assist* or stamp* or supplement* or bank* or package* or secur*)).ti.
51	((social* or communit*) adj2 (support* or intervention*)).ti.
52	or/35-51
53	34 and 52
54	letter.pt. or letter/
55	note.pt.
56	editorial.pt.
57	case report/ or case study/
58	(letter or comment*).ti.
59	or/54-58
60	randomized controlled trial/ or random*.ti,ab.
61	59 not 60
62	animal/ not human/
63	nonhuman/
64	exp Animal Experiment/
65	exp Experimental Animal/
66	animal model/
67	exp Rodent/
68	(rat or rats or rodent* or mouse or mice).ti.
69	or/61-68
70	53 not 69
71	limit 70 to English language
72	(conference abstract* or conference review or conference paper or conference proceeding).db,pt,su.
73	71 not 72
74	health economics/
75	exp economic evaluation/
76	exp health care cost/
77	exp fee/
78	budget/
79	funding/
80	resource allocation/
81	budget*.ti,ab.
82	cost*.ti,ab.
83	(economic* or pharmaco?economic*).ti,ab.
84	(price* or pricing*).ti,ab.
85	(financ* or fee or fees or expenditure* or saving*).ti,ab.
86	(value adj2 (money or monetary)).ti,ab.
87	resourc* allocat*.ti,ab.
88	(fund or funds or funding* or funded).ti,ab.
89	(ration or rations or rationing* or rationed).ti,ab.
90	or/74-89
91	statistical model/
92	exp economic aspect/
93	91 and 92
94	*theoretical model/
95	*nonbiological model/
96	stochastic model/
97	decision theory/
98	decision tree/
99	monte carlo method/

#	Searches
100	(markov* or monte carlo).ti,ab.
101	econom* model*.ti,ab.
102	(decision* adj2 (tree* or analy* or model*)).ti,ab.
103	or/93-102
104	quality adjusted life year/
105	"quality of life index"/
106	short form 12/ or short form 20/ or short form 36/ or short form 8/
107	sickness impact profile/
108	(quality adj2 (wellbeing or well being)).ti,ab.
109	sickness impact profile.ti,ab.
110	disability adjusted life.ti,ab.
111	(qal* or qtime* or qwb* or daly*).ti,ab.
112	(euroqol* or eq5d* or eq 5*).ti,ab.
113	(qol* or hql* or hqol* or h qol* or hrqol* or hr qol*).ti,ab.
114	(health utility* or utility score* or disutilit* or utility value*).ti,ab.
115	(hui or hui1 or hui2 or hui3).ti,ab.
116	(health* year* equivalent* or hye or hyes).ti,ab.
117	discrete choice*.ti,ab.
118	rosser.ti,ab.
119	(willingness to pay or time tradeoff or time trade off or tto or standard gamble*).ti,ab.
120	(sf36* or sf 36* or short form 36* or shortform 36* or shortform36*).ti,ab.
121	(sf20 or sf 20 or short form 20 or shortform 20 or shortform20).ti,ab.
122	(sf12* or sf 12* or short form 12* or shortform 12* or shortform12*).ti,ab.
123	(sf8* or sf 8* or short form 8* or shortform 8* or shortform8*).ti,ab.
124	(sf6* or sf 6* or short form 6* or shortform 6* or shortform6*).ti,ab.
125	or/104-124
126	73 and (90 or 103 or 125)

Database: INAHTA

Date of last search: 21/11/222

1	"Parents"[mhe]
2	"family relations"[mh]
3	"Maternal Behavior"[mhe]
4	"Parent-Child Relations"[mhe]
5	"Parenting"[mh]
6	"Paternal Behavior"[mh]
7	"Infant Care"[mh]
8	(famil* or father* or husband* or mother* or partner* or spous* or maternal* or parent* or paternal* or grandparent* or care giver* or caregiver* or guardian*) [Title] OR (famil* or father* or husband* or mother* or partner* or spous* or maternal* or parent* or paternal* or grandparent* or care giver* or caregiver* or guardian*) [Abs]
9	"Child"[mhe]
10	"Infant"[mhe]
11	"Minors"[mh]
12	"Pediatrics"[mhe]
13	"Pediatric Nursing"[mh]
14	(child* or baby or babies or boy or boys or girl or girls or infan* or juvenile* or kid or kids or kindergar* or minors or paediatric* or pediatric* or preschool* or schoolchild* or school age* or toddler*) [Title] OR (child* or baby or babies or boy or boys or girl or girls or infan* or juvenile* or kid or kids or kindergar* or minors or paediatric* or pediatric* or preschool* or schoolchild* or school age* or toddler*) [Abs]
15	#14 OR #13 OR #12 OR #11 OR #10 OR #9 OR #8 OR #7 OR #6 OR #5 OR #4 OR #3 OR #2 OR #1
16	"Weaning"[mh]
17	"Infant Food"[mh]

18	"Child Nutritional Physiological Phenomena"[mh]
19	"Maternal Nutritional Physiological Phenomena"[mh]
20	"Infant Nutritional Physiological Phenomena"[mh]
21	((complementary or supplement* or introduc*) AND (feed* or food*)) [Title] OR ((complementary or supplement* or introduc*) AND (feed* or food*)) [Abs]
22	(((solid or baby or soft or finger or mash* or puree* or infant*) AND (food* or fruit* or veg*)) or solids or babyfood*) [Title] OR (((solid or baby or soft or finger or mash* or puree* or infant*) AND (food* or fruit* or veg*)) or solids or babyfood*) [Abs]
23	wean* [Title] OR wean* [Abs]
24	#23 OR #22 OR #21 OR #20 OR #19 OR #18 OR #17 OR #16
25	"Diet"[mh]
26	"Diet, Healthy"[mh]
27	"Feeding Behavior"[mh]
28	"Nutritive Value"[mh]
29	"Nutritional Requirements"[mh]
30	"Energy Intake"[mh]
31	"Fruit"[mh]
32	"Vegetables"[mh]
33	((food* or feed* or diet* or nutrition* or nutritive or feed* or eating) AND (habit* or behavio* or attitude* or belief* or practice*)) [Title] OR ((food* or feed* or diet* or nutrition* or nutritive or feed* or eating) AND (habit* or behavio* or attitude* or belief* or practice*)) [Abs]
34	((nutrition* or nutrient* or micronutrient* or "micro-nutrient" or "micro-nutrients" or micro nutrient* or alimentary or diet* or energy or calorie* or fruit* or vegetable*) AND (intake or consum* or requirement* or value*)) [Title] OR ((nutrition* or nutrient* or micronutrient* or "micro-nutrient" or "micro-nutrients" or micro nutrient* or alimentary or diet* or energy or calorie* or fruit* or vegetable*) AND (intake or consum* or requirement* or value*)) [Abs]
35	((health* or balance* or nutrition*) AND (food* or eat* or diet*)) [Title] OR ((health* or balance* or nutrition*) AND (food* or eat* or diet*)) [Abs]
36	(family food*) [Title] OR (family food*) [Abs]
37	"sodium, dietary"[mh]
38	"sodium chloride, dietary"[mh]
39	"artificially sweetened beverages"[mh]
40	" sugar-sweetened beverages"[mh]
41	"Carbonated beverages"[mh]
42	(((salt* or sugar* or sodium) AND (intake or consum*)) or soda* or candy or chocolate* or sweet* or confection*) [Title] OR (((salt* or sugar* or sodium) AND (intake or consum*)) or soda* or candy or chocolate* or sweet* or confection*) [Abs]
43	((soft or fizzy or sugar*) AND (drink* or beverage*)) [Title] OR ((soft or fizzy or sugar*) AND (drink* or beverage*)) [Abs]
44	#43 OR #42 OR #41 OR #40 OR #39 OR #38 OR #37 OR #36 OR #35 OR #34 OR #33 OR #32 OR #31 OR #30 OR #29 OR #28 OR #27 OR #26 OR #25
45	#44 OR #24
46	#45 AND #15
47	Limit to English Language

Database: CRD HTA (last updated 31st March 2018)

Date of last search: 21/11/2022

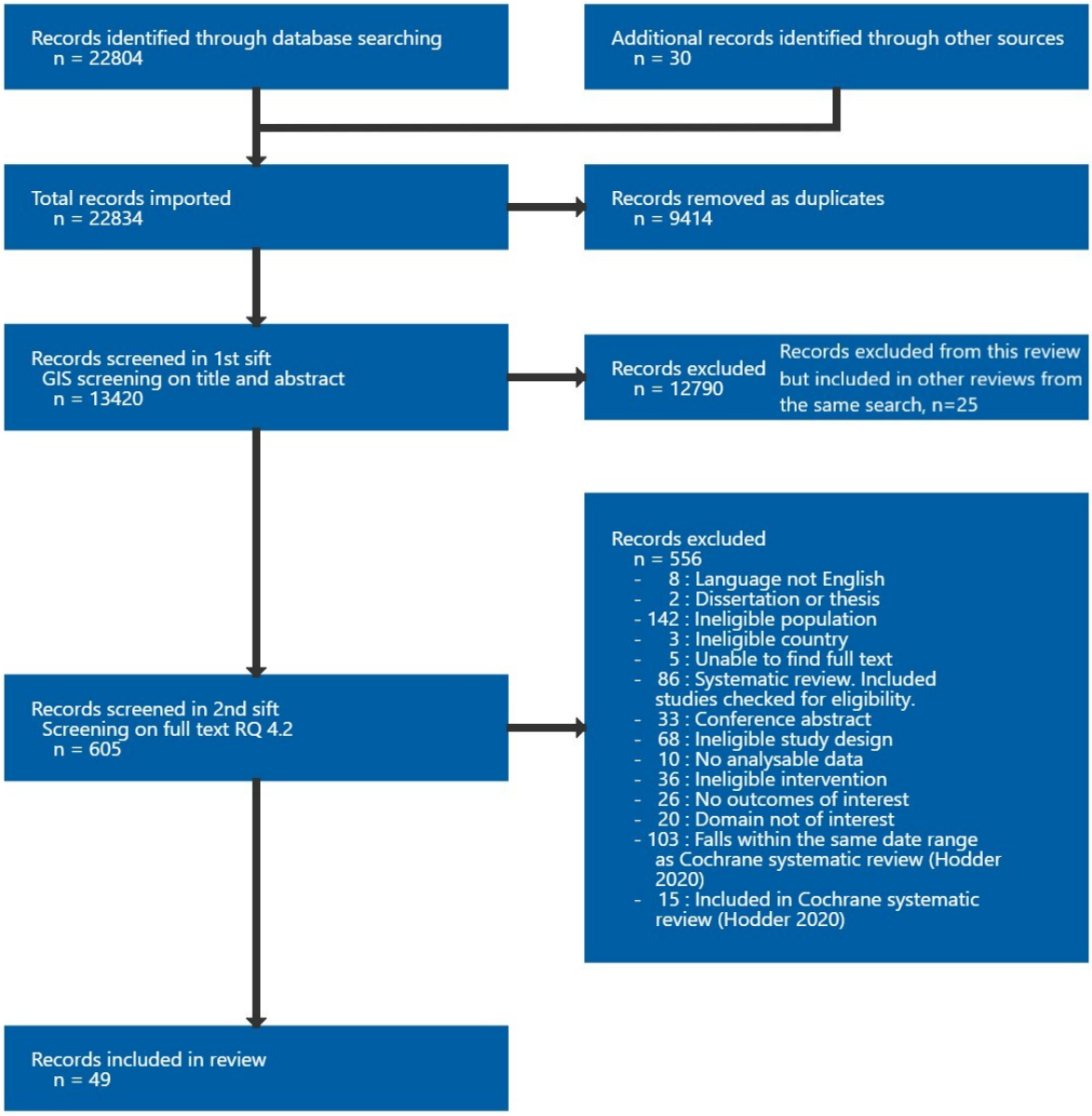
#	Searches
1	MeSH DESCRIPTOR Parents EXPLODE ALL TREES
2	MeSH DESCRIPTOR family relations
3	MeSH DESCRIPTOR maternal behavior EXPLODE ALL TREES
4	MeSH DESCRIPTOR Parent-Child Relations EXPLODE ALL TREES
5	MeSH DESCRIPTOR parenting
6	MeSH DESCRIPTOR paternal behavior
7	MeSH DESCRIPTOR infant care
8	(famil* or father* or husband* or mother* or partner* or spous* or maternal* or parent* or paternal* or grandparent* or care giver* or caregiver* or guardian*)

#	Searches
9	MeSH DESCRIPTOR Child EXPLODE ALL TREES
10	MeSH DESCRIPTOR Infant EXPLODE ALL TREES
11	MeSH DESCRIPTOR Minors
12	MeSH DESCRIPTOR Pediatrics EXPLODE ALL TREES
13	MeSH DESCRIPTOR Pediatric nursing
14	(child* or baby or babies or boy or boys or girl or girls or infan* or juvenile* or kid or kids or kindergar* or minors or paediatric* or pediatric* or preschool* or schoolchild* or school age* or toddler*)
15	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14
16	MeSH DESCRIPTOR Weaning
17	MeSH DESCRIPTOR Infant food
18	MeSH DESCRIPTOR Child Nutritional Physiological Phenomena
19	MeSH DESCRIPTOR Maternal Nutritional Physiological Phenomena
20	MeSH DESCRIPTOR Infant Nutritional Physiological Phenomena
21	((complementary or supplement* or introduc*) NEAR2 (feed* or food*))
22	(((solid or baby or soft or finger or mash* or puree* or infant*) NEAR2 (food* or fruit* or veg*)) or solids or babyfood*)
23	(wean*)
24	#16 OR #17 OR #18 OR #19 OR #20 OR #21 OR #22 OR #23
25	MeSH DESCRIPTOR Diet
26	MeSH DESCRIPTOR Diet, Healthy
27	MeSH DESCRIPTOR Feeding Behavior
28	MeSH DESCRIPTOR Nutritive Value
29	MeSH DESCRIPTOR Nutritional Requirements
30	MeSH DESCRIPTOR Energy Intake
31	MeSH DESCRIPTOR Fruit
32	MeSH DESCRIPTOR Vegetables
33	((food* or feed* or diet* or nutrition* or nutritive or feed* or eating) NEAR4 (habit* or behavio* or attitude* or belief* or practice*))
34	((nutrition* or nutrient* or micronutrient* or micro-nutrient* or alimentary or diet* or energy or calorie* or fruit or fruits or vegetable or vegetables) NEAR4 (intake or consum* or requirement* or value*))
35	((health* or balance* or nutrition*) NEAR4 (food* or eat* or diet*))
36	(family food*)
37	(MeSH DESCRIPTOR Sodium, Dietary)
38	(MeSH DESCRIPTOR Sodium Chloride, Dietary)
39	(MeSH DESCRIPTOR Artificially Sweetened Beverages)
40	(MeSH DESCRIPTOR Sugar-Sweetened Beverages)
41	(MeSH DESCRIPTOR Carbonated Beverages)
42	((((salt* or sugar* or sodium) NEAR2 (intake or consum*)) or soda* or candy or chocolate* or sweet* or confection*))
43	(((soft or fizzy or sugar*) NEAR1 (drink* or beverage*)))
44	#25 OR #26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41 OR #42 OR #43
45	#24 OR #44
46	(#15 AND #45) IN HTA

Appendix C Effectiveness evidence study selection

Study selection for review question: What interventions are effective to promote healthy eating and drinking practices, including complementary feeding, in children from 12 months to 5 years (in line with government advice)?

Figure 1: Effectiveness evidence study selection flow chart



Appendix D Evidence tables

Evidence tables for review question: What interventions are effective to promote healthy eating and drinking practices, including complementary feeding, in children from 12 months to 5 years (in line with government advice)?

Included here are evidence tables for the studies identified through our own literature search as well as for the studies included in Hodder 2020 Cochrane review that reported on outcomes relevant for our review but not reported in the Hodder 2020 Cochrane review. Additional information on the studies included in the Hodder 2020 are provided in appendix L.

Table 4: Evidence tables

Braga-Pontes, 2022

Bibliographic Reference	Braga-Pontes, C.; Simoes-Dias, S.; Lages, M.; Guarino, M.P.; Graca, P.; Nutrition education strategies to promote vegetable consumption in preschool children: the Veggies4myHeart project; Public health nutrition; 2022; vol. 25 (no. 4); 1061-1070

Study details

Country/ies where study was carried out	Portugal
Study type	Cluster randomised controlled trial
Study dates	April 2019 to June 2019
Inclusion criteria	Children: • aged 3 to 6 years

	• attended the public preschools selected for the study on the date when the assessment sessions were conducted • provided informed consent by their caregivers.
Exclusion criteria	Children who did not want to participate at the time of assessment
Patient characteristics	**Child's age, mean (SD), years** Digital games (DG) = 4.87 (0.801) Storybook (SB) = 4.73 (0.987) Storybook and stickers = 4.28 (1.047) Control = 4.7 (0.968) **Age, n (%), years** **3** Digital games (DG) = 2 (5.1) Storybook (SB) = 6 (15) Storybook and stickers = 14 (30.4) Control = 4 (10.8) **4** Digital games (DG) = 9 (23.1) Storybook (SB) = 8 (20) Storybook and stickers = 11 (23.9) Control = 12 (32.4)

	5 Digital games (DG) = 20 (51.3) Storybook (SB) = 17 (42.5) Storybook and stickers = 15 (32.6) Control = 12 (32.4) **6** Digital games (DG) = 8 (20.6) Storybook (SB) = 9 (22.5) Storybook and stickers = 6 (13) Control = 9 (24.3) **Caregivers age, mean (SD), years** Digital games (DG) = 38.43 (4.730) Storybook (SB) = 35.72 (4.747) Storybook and stickers = 35.84 (5.332) Control = 36.94 (5.278) **Caregivers educational level, n (%)** **Basic education** Digital games (DG) = 1 (2.9) Storybook (SB) = 9 (28.1) Storybook and stickers = 6 (14)

	Control = 4 (12.9) **High school** Digital games (DG) = 4 (11.4) Storybook (SB) = 16 (50) Storybook and stickers = 14 (32.6) Control = 17 (54.8) **University education** Digital games (DG) = 30 (85.7) Storybook (SB) = 7 (21.9) Storybook and stickers = 22 (51.2) Control = 10 (14.5)
Intervention(s)/control	**Intervention:** consisted of 20-min educational sessions once a week for 5 weeks and was carried out by 3 groups of researchers and the main researcher was present in all groups. All the interventions were conducted simultaneously: • **Digital games (DG)**: consisted of 5 mini-games and each of these had a vegetable superhero (tomato, purple cabbage, cucumber, carrot and lettuce) associated with it. DG included tailored audio messages about the characteristics and health benefits of these vegetables. • **Storybook (SB)**: was made up of 5 chapters and each one had a vegetable superhero, equal to the DG, and it was clear in the story the characteristics and functions of the vegetables. • **Storybook and stickers (SBS)**: educational sessions were based on the SB and children received a reward (sticker) when they ate the vegetables at the end of the session.

	Control: educational sessions with the Portuguese Food Wheel Guide (PFWG). At the end of each session, a play food was distributed to each child and they had to place it in the right group of the PFWG. PFWG is the gold standard tool in nutrition education in Portugal and it was used to promote the group of vegetables. In all groups, each week a real vegetable was distributed (tomato, purple cabbage, cucumber, carrot or lettuce), according to the vegetable that was in the DG or the SB, allowing each child to explore sensorially the vegetable. At the end of each educational session the 5 vegetables cut in similar portions were offered one after the other to each child. The order to offer the 5 vegetables was different during the 5 weeks of intervention. Children could serve themselves from a shared plate twice and eat the number of portions they wanted each time. Classroom staff were required not to motivate or congratulate children for eating vegetables.
Duration of follow-up	6 months Measurement of vegetable intake was made at baseline (week 1), after each educational session (weeks 2 – 6), at post-intervention (week 7) and follow-up (week 29).
Sources of funding	Not industry funded
Sample size	N = 162 Digital games (DG) n = 39 Storybook (SB) n = 40 Storybook and stickers n = 46 Control n = 37 Design effect (using ICC = 0.016 as used in Hodder 2020) = 1 + (average cluster size – 1) x ICC = 1.048
Other information	32/162 (19.8 %) children were 6 years old.

ICC: intracluster correlation coefficient; n: number of participants; SD: standard deviation.

Study arms

Digital games (n = 39)

Cluster = 1 preschool (2 classrooms)

Storybook (n = 40)

Cluster = 1 preschool (2 classrooms)

Storybook and stickers (n = 46)

Cluster = 1 preschool (2 classrooms)

Control (n = 37)

Cluster = 1 preschool (2 classrooms)

Outcomes

Vegetable intake at 1 week follow-up

Outcome	Digital games, n = 31	Storybook, n = 35	Storybook and stickers, n = 41	Control, n = 32
Lettuce (Number of portions) Mean (SD)	2.29 (1.82)	1.74 (1.73)	3 (3.16)	4.13 (5.1)
Carrot (Number of portions) Mean (SD)	4.5 (3.86)	5.26 (3.59)	5.25 (4.46)	9.5 (5.22)

Outcome	Digital games, n = 31	Storybook, n = 35	Storybook and stickers, n = 41	Control, n = 32
Purple cabbage (Purple cabbage) Mean (SD)	2.79 (3.47)	4 (4.66)	3.25 (5.03)	5.13 (10.34)
Cucumber (Number of portions) Mean (SD)	1.86 (2.69)	3.21 (2.64)	5.2 (5.55)	4.81 (4.65)
Tomato (Number of portions) Mean (SD)	1.79 (2.69)	2.9 (3.16)	4.3 (6.17)	3.19 (3.8)

n: number of participants; SD: standard deviation.

Post-intervention

Group numbers (n) reported are adjusted for cluster effect.

Vegetable intake at 23 weeks follow-up

Outcome	Digital games, n = 16	Storybook, n = 19	Storybook and stickers, n = 23	Control, n = 18
Lettuce (Number of portions) Mean (SD)	1.57 (1.79)	2.74 (3.03)	1.5 (1.54)	2.56 (2.76)
Carrot (Number of portions) Mean (SD)	4.14 (4.47)	7.68 (5.13)	3.5 (2.26)	6.13 (4.72)
Purple cabbage (Number of portions) Mean (SD)	1.07 (1.14)	0.95 (1.39)	0.85 (1.23)	4.13 (6.54)

Outcome	Digital games, n = 16	Storybook, n = 19	Storybook and stickers, n = 23	Control, n = 18
Cucumber (Number of portions) Mean (SD)	2.79 (3.38)	3.47 (3.99)	3.9 (3.8)	5.06 (4.23)
Tomato (Number of portions) Mean (SD)	2.64 (5.73)	2.42 (3.22)	2.7 (4.14)	3.75 (5.15)

n: number of participants; SD: standard deviation.

Group numbers (n) reported are adjusted for cluster effect.

Critical appraisal – Cochrane Risk of Bias tool (RoB 2.0) Cluster randomised trials NGA

Section	Question	Answer
1a. Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	Low *(Randomisation was carried out by draw, whereby the four interventions were drawn to the four schools that agreed to participate. No individual level significant differences at baseline.)*
1b. Bias arising from the timing of identification and recruitment of individual participants in relation to timing of randomisation	Risk of bias judgement for the timing of identification and recruitment of individual participants in relation to timing of randomisation	Low *(Although individuals were identified after randomisation, more likely selection of individual participants was not affected by knowledge of the intervention. No significant differences between groups at baseline.)*
2. Bias due to deviations from intended interventions (If your aim is to assess the effect of assignment to	Risk of bias judgement for deviations from intended interventions	Low *(Facilitators were more likely aware of the trial and study; there was no information if children/parent were aware of the assigned intervention.*

Section	Question	Answer
intervention, answer the following questions).		*There were unlikely deviations from the intended intervention nor individuals or clusters analysed in different groups to allocation.)*
3. Bias due to missing outcome data	Risk of bias judgement for missing outcome data	High *(13/119 (11%) dropped out at post-intervention (7 weeks). 60/119 (50.4%) dropped out at follow-up (29 weeks). Reasons for missing outcome data not given. No information if sensitivity analyses were performed for all outcomes with missing data and unclear whether missingness in the outcome depended on it's true value.)*
4. Bias in measurement of the outcome	Risk of bias judgement for measurement of the outcome	Low *(Although outcome assessors were more likely aware of the intervention received by study participants, vegetable portions were defined and all measurements of vegetable intake were made by researchers, this way minimising bias rising by knowledge of intervention received.)*
5. Bias in selection of the reported result	Risk of bias for selection of the reported result	Low *(Reported outcome data not likely to have been selected from results of multiple analyses.)*
Overall bias and Directness	Risk of bias judgement	High
Overall bias and Directness	Overall Directness	Partially applicable *(32/162 (19.8 %) children were 6 years old.)*

NGA: National Guideline Alliance; RoB: risk of bias.

Daniels, 2014

Bibliographic Reference	Daniels, Lynne Allison; Mallan, Kimberley Margaret; Battistutta, Diana; Nicholson, Jan Maree; Meedeniya, Josephine Emma; Bayer, Jordana Kim; Magarey, Anthea; Child eating behavior outcomes of an early feeding intervention to reduce risk indicators for child obesity: the NOURISH RCT; Obesity (Silver Spring, Md.); 2014; vol. 22 (no. 5); E104-11

Study details

Country/ies where study was carried out	Australia
Study type	Randomised controlled trial (RCT)
Study dates	2008 to 2011
Inclusion criteria	Mother and infant pairs: • first-time mothers • aged 18 years or older • delivered a healthy term infant (>35 weeks, >2500 g) • do not have recent history of intravenous substance abuse, domestic violence, or eating disorders • written and spoken English ability • living in the study cities.
Exclusion criteria	Not reported
Patient characteristics	**Child's age at baseline mean (SD), months** Total = 4.3 (1.0) Intervention = 4.3 (1.0) Control = 4.3 (1.0) **Mother's Socioeconomic Indexes for Areas Index of Relative Advantage and Disadvantage (relative disadvantage ≤7th decile), n (%)**

	Total = 230 (33) Intervention = 113 (32) Control = 117 (34) **Mother born in Australia, n (%)** Total = 542 (78) Intervention = 272 (78) Control = 270 (79) **Maternal Education, n (%)** ***University degree*** Total = 406 (58) Intervention = 207 (59) Control = 199 (58) **Maternal age at delivery, mean (SD), years** Total = 30.1 (5.3) Intervention = 30.2 (5.3) Control = 29.9 (5.3)
Intervention(s)/control	**Intervention:** comprised two modules. 1st module started immediately after baseline (children aged 4-7 months) with the 2nd module commencing 6 months after completion of the first (children aged 13-16 months). Each module comprised six interactive group sessions (10 – 15 mothers per group, total 40 groups) of 1 – 1.5 hours duration, co-facilitated by a dietitian and psychologist. Developmentally appropriate content addressed these themes:

	Theme 1: repeated neutral exposure to unfamiliar foods combined with limiting exposure to unhealthy foods to promote healthy food preferences. Theme 2: responsive feeding that recognizes and responds appropriately to cues of hunger and satiety to promote self-regulation of energy intake to need. Theme 3: "feeding is parenting" and positive parenting (encouragement of autonomy, warmth, self-efficacy). All intervention participants were provided with detailed written information covering session content. **Control:** had access to universal community child health services, which, at the mother's initiative, could include child weighing and web- or telephone-based information. An important distinction was that controls did not receive anticipatory guidance but sought advice on a specific problem.
Duration of follow-up	6 months post-intervention (children were 2 years old)
Sources of funding	Partially industry funded (Industry funders: HJ Heinz and Meat and Livestock Australia)
Sample size	N = 698 Intervention n = 352 Control n = 346
Other information	Daniels 2014, Daniels 2015 and Magarey 2016 are all NOURISH RCT studies, but different outcomes extracted.

G: grams; n: number of participants; SD: standard deviation.

Study arms

Intervention (n = 352)

Control (n = 346)

Outcomes

Nutrition outcomes at child age 24 months (6 months post-phase 2 intervention; 15 months post-phase 1 intervention)

Outcome	Intervention, n = 222	Control, n = 245
Non-milk sweet beverages (fruit juice, cordial, carbonated drinks) No of events	n = 83; % = 33.3	n = 95; % = 35.7
Number of vegetables liked Already reported in Cochrane and meta-analysed as vegetable intake Median (IQR)	13 (11 to 17)	13 (9 to 16)
Number of fruits liked Median (IQR)	13 (11 to 15)	12 (10 to 15)

IQR: interquartile range; n: number of participants.

Intervention was delivered in 2 phases. Phase 1 for 3 months, then 6 months interval before phase 2 for 3 months. Outcomes reported here refer to post phase-2 intervention

Critical appraisal – NGA Critical appraisal – Cochrane RoB 2.0 – standard RCT (domain-based summaries)

Section	Question	Answer
Domain 1: Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	Low *(Randomisation was performed by a statistician external to the study using a permutated-block schedule within each assessment clinic to balance*

Section	Question	Answer
		participant socio-economic characteristic across study groups. No significant baseline differences were observed between groups.)
Domain 2a: Risk of bias due to deviations from the intended interventions (effect of assignment to intervention)	Risk of bias for deviations from the intended interventions (effect of assignment to intervention)	Some concerns *(Participants and facilitators were probably aware of the intervention. There was one protocol violation but this was unlikely to impact the results, although type of violation was not reported.)*
Domain 3. Bias due to missing outcome data	Risk-of-bias judgement for missing outcome data	High *(Missing outcome data: 130/352 (37%) intervention and 101/346 (29.2%) control arms for nutrition outcomes and 131/352 (37.2%) intervention and 102/346 (29.5%) control arms for child's eating behaviours outcomes. No information is provided about discontinuation and it is unclear if missingness of outcome depended on the true value.)*
Domain 4. Bias in measurement of the outcome	Risk-of-bias judgement for measurement of the outcome	Some concerns *(Validated questionnaires were provided to both arms: child eating behaviours were assessed at follow up via the parent report Children's Eating Behaviour Questionnaire (CEBQ) and child food preferences were assessed using a standardised tool adapted to reflect foods commonly consumed by Australian children. Both questionnaires were self-report by parents and this type of data collection could introduce bias (subjective outcome).Most likely outcome assessors were blind to allocation.)*
Domain 5. Bias in selection of the reported result	Risk-of-bias judgement for selection of the reported result	Low *(Prespecified protocol available.)*
Overall bias and Directness	Risk of bias judgement	High
Overall bias and Directness	Overall Directness	Directly applicable

Section	Question	Answer
Overall bias and Directness	Risk of bias variation across outcomes	NA

NA: not applicable; NGA: National Guideline Alliance; RCT: randomised controlled trial; RoB: risk of bias.

Daniels, 2015

Bibliographic Reference	Daniels, Lynne Allison; Mallan, Kimberley Margaret; Nicholson, Jan Maree; Thorpe, Karen; Nambiar, Smita; Mauch, Chelsea Emma; Magarey, Anthea; An Early Feeding Practices Intervention for Obesity Prevention; Pediatrics; 2015; vol. 136 (no. 1); e40-9

Study details

Country/ies where study was carried out	Australia
Study type	Randomised controlled trial (RCT)
Study dates	2008 to 2009
Inclusion criteria	Mother and infant pairs: • first-time mothers • aged 18 years or older • delivered a healthy term infant (>35 weeks, >2500 g) • written and spoken English ability

	• maternal score on the Kessler 10 Psychological Distress Scale (K10) below 30 (not indicative of high maternal psychological distress).
Exclusion criteria	• Mothers in the clinical range of 10-item self-assessment Kessler Psychological Distress Scale
Patient characteristics	**Child's age at baseline mean (SD), months** Total = 4.3 (1.0) Intervention = 4.3 (1.0) Control = 4.3 (1.0) **Mother's Socioeconomic Indexes for Areas Index of Relative Advantage and Disadvantage (relative disadvantage ≤7th decile), n (%)** Total = 230 (33) Intervention = 113 (32) Control = 117 (34) **Mother born in Australia, n (%)** Total = 542 (78) Intervention = 272 (78) Control = 270 (79) **Maternal Education, n (%)** ***University degree*** Total = 406 (58) Intervention = 207 (59)

	Control = 199 (58) **Maternal age at delivery, mean (SD), years** Total = 30.1 (5.3) Intervention = 30.2 (5.3) Control = 29.9 (5.3)
Intervention(s)/control	**Intervention:** comprised 2 modules commencing when the children were aged 4 to 7 and 13 to 16 months. Each module involved 6 group sessions (40 groups across both modules and sites) of 1- to 2- hour duration, conducted over 12 weeks. Sessions were delivered at child health clinics by a dietitian and a psychologist. Three aspects of feeding previously associated with healthy child eating behaviour and weight status were targeted: (1) increased exposure to healthy foods and decreased exposure to unhealthy foods to promote the development of healthy food preferences (2) responsive feeding that recognizes and responds appropriately to infant cues of hunger and satiety to promote self-regulation of intake (3) positive parenting (warmth, encouragement of autonomy, and self-efficacy) **Control:** had self-directed access to universal community child health services, potentially child weighing, and information via the Internet or telephone help line.
Duration of follow-up	10 months after baseline (child age 14 months and 6 months after completion of Module 1) 20 months after baseline (child age 2 years and 6 months after completion of Module 2) 38 months after baseline (child age 3.5 years) 56 months after baseline (child age 5 years)

	Baseline data were collected at child age 4 months
Sources of funding	Partially industry funded (Industry funders: HJ Heinz and Meat and Livestock Australia)
Sample size	N = 698 Intervention n = 352 Control n = 346
Other information	Daniels 2014 Daniels 2015 and Magarey 2016 are all NOURISH RCT studies, but different outcomes extracted.

G: grams; n: number of participants; SD: standard deviation.

Study arms

Intervention (n = 352)

Control (n = 346)

Outcomes

Anthropometry outcomes at 56 months after baseline

Outcome	**Intervention, n = 291**	**Control, n = 307**
BMIz World Health Organisation standards. Intervention n=213; Control n = 211. Study reported BMIZ N = 587	0.34 (0.06)	0.41 (0.06)

Outcome	Intervention, n = 291	Control, n = 307
EMM (SEM)		

BMIz: body mass index z-score; EMM: Effect measure modification; n: number of participants; SEM: Standard Error of Mean.

Study also reported outcomes at 6 months after completion of Module 1 (child age 14 months); 6 months after completion of Module 2 (child age 2 years) and 2 years after completion of module 2 (child age 3.5 years)

Critical appraisal – NGA Critical appraisal – Cochrane RoB 2.0 – standard RCT (domain-based summaries)

Section	Question	Answer
Domain 1: Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	Low *(Randomisation was performed independently. No significant baseline differences were observed between groups.)*
Domain 2a: Risk of bias due to deviations from the intended interventions (effect of assignment to intervention)	Risk of bias for deviations from the intended interventions (effect of assignment to intervention)	Some concerns *(Participants and facilitators were probably aware of the intervention. There was one protocol violation but this was unlikely to impact the results, although type of violation was not reported.)*
Domain 3. Bias due to missing outcome data	Risk-of-bias judgement for missing outcome data	High *(Missing outcome data: 61/352 (17.3%) for intervention and 39/346 (11.3%) for control arms (T2, 10 months after baseline assessment), 92/352 (26%) for intervention and 65/346 (18.8%) for control arms (T3, 20 months after baseline assessment), 102/352 (29%) for intervention and 92/346 (26.6%) for control arms (T4, 38 months after baseline assessment), 139/352 (39.5%) for intervention and 135/346 (39%) for control arms (T5, 56 months after baseline assessment). No information is provided about discontinuation and it is unclear if missingness of outcome depended on the true value.)*

Section	Question	Answer
Domain 4. Bias in measurement of the outcome	Risk-of-bias judgement for measurement of the outcome	Low *(Anthropometric measurements were undertaken by trained research staff, independent of intervention delivery and blinded to participant allocation status and using standard equipment and protocols.)*
Domain 5. Bias in selection of the reported result	Risk-of-bias judgement for selection of the reported result	Low *(Prespecified protocol available.)*
Overall bias and Directness	Risk of bias judgement	High
Overall bias and Directness	Overall Directness	Directly applicable
Overall bias and Directness	Risk of bias variation across outcomes	NA

NA: not applicable; NGA: National Guideline Alliance; RCT: randomised controlled trial; RoB: risk of bias.

De Coen, 2012

Bibliographic Reference	De Coen, Valerie; De Bourdeaudhuij, Ilse; Vereecken, Carine; Verbestel, Vera; Haerens, Leen; Huybrechts, Inge; Van Lippevelde, Wendy; Maes, Lea; Effects of a 2-year healthy eating and physical activity intervention for 3-6-year-olds in communities of high and low socio-economic status: the POP (Prevention of Overweight among Pre-school and school children) project; Public health nutrition; 2012; vol. 15 (no. 9); 1737-45

Study details

Country/ies where study was carried out	Belgium

Study type	Cluster randomised controlled trial
Study dates	September 2008 to April 2010
Inclusion criteria	Children: • attending pre-primary or primary school • being 3 – 6 years old • parents provided a written consent at the start.
Exclusion criteria	Not reported
Patient characteristics	Child's age, mean (SD), years = 4.95 (1.31)
Intervention(s)/control	**Intervention:** implemented over two school years (2008–2009 and 2009–2010). Schools: • implemented 5 Healthy Weeks per intervention year (one for each cluster of topics) with a minimum 1h of classroom time dedicated to the topic together with extracurricular activities (for example during the vegetables and fruits week only fruits could be brought to school as a snack; schools organized fruit and vegetable tastings), • evaluated and improve their playground and snack and beverage policy, and • communicated with the parents on the programme and distribute materials to the parents. Parents: • received a poster visualizing the target messages and containing short tips regarding parenting practices and styles to encourage children to stick to the healthy eating and PA targets, • received 5 letters, containing detailed information on the intervention topics and a website link with practical information (for example tips and recipes),

	• based on the FFQ in the parental questionnaire received a written, normative individual tailored advice on their child's consumption of water, milk, fruits, vegetables, soft drinks and sweet and savoury snacks, and their PA and screen-time behaviour. **Control:** no intervention. Details not reported.
Duration of follow-up	2 years
Sources of funding	Not industry funded
Sample size	N = 1589 children Intervention group = 1032 Control group = 557 n = 1280 questionnaire completed at baseline Adjusting for clustering using ICC = 0.016 (as used in Cochrane review) Design effect = 1.48
Other information	Not clear how many children were >5 years old.

ICC: intracluster correlation coefficient; FFQ: Food Frequency Questionnaires; n: number of participants; PA: physical activity; SD: standard deviation.

Study arms

Multicomponent intervention (n = 2034)

Clusters = 18 schools

Control (n = 1208)

Clusters = 13 schools

Outcomes

Diet outcomes after 2 years intervention: no follow-up

Outcome	**Multicomponent intervention , n = 268**	**Control, n = 298**
Sugar sweetened beverage intake (ml/d) Mean (SD)	53.7 (90.8)	58.2 (86.1)
Sugar sweetened beverage intake High SES Adjusted values: intervention n=86; control n=53 Mean (SD)	44.1 (75.5)	31.9 (52.7)
Sugar sweetened beverage intake Median SES Adjusted values: intervention n=69; control n=31 Mean (SD)	48.4 (78.7)	94.4 (106)
Sugar sweetened beverage intake Low SES Adjusted values: intervention n=112; control n=117 Mean (SD)	58.5 (96.8)	56 (82.3)
Fruit consumption (g/d) Mean (SD)	151 (97.4)	139 (95.2)

Outcome	Multicomponent intervention , n = 268	Control, n = 298
Fruit consumption High SES Adjusted values: intervention n=86; control n=53 Mean (SD)	164 (95.7)	156 (94.7)
Fruit consumption Medium SES Adjusted values: intervention n=69; control n=31 Mean (SD)	135 (87)	136 (94.4)
Fruit consumption Low SES Adjusted values: intervention n=112; control n=117 Mean (SD)	153 (93.1)	135 (96.9)
Vegetable consumption (g/d) Mean (SD)	91.2 (62.6)	83.3 (57.5)
Vegetable consumption High SES Adjusted values: intervention n=86; control n=53 Mean (SD)	101 (61.1)	101 (57.7)
Vegetable consumption Medium SES Adjusted values: intervention n=69; control n=31 Mean (SD)	87.8 (50.7)	86 (56.1)
Vegetable consumption Low SES Adjusted values: intervention n=112; control n=117	94.6 (71.6)	76.1 (56.1)

Outcome	Multicomponent intervention , n = 268	Control, n = 298
Mean (SD)		

d: day; g: gram; ml: milliliter; n: number of participants; SES: socioeconomic status; SD: standard deviation.

BMI outcomes after 2 years intervention: no follow-up

Outcome	Multicomponent intervention, n = 452	Control, n = 299
BMI z-score Mean (SD)	0.11 (1.03)	0.15 (0.89)
BMI z-score High SES schools Adjusted values: intervention n=145; control n=73 Mean (SD)	0.17 (0.95)	0.15 (0.97)
BMI z-score Medium SES schools Adjusted values: intervention n=112; control n=50 Mean (SD)	0.23 (0.95)	0.11 (0.83)
BMI z-score Low SES schools Adjusted values: intervention n=195; control n=176 Mean (SD)	0 (1.11)	0.16 (0.88)

BMI: body mass index; n: number of participants; SES: socioeconomic status; SD: standard deviation.

Group numbers (n) reported are adjusted for cluster effect

Critical appraisal – Cochrane Risk of Bias tool (RoB 2.0) Cluster randomised trials NGA

Section	Question	Answer
1a. Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	High *(Allocation sequence is based on socio-economic characteristics. Schools were aware of the fact that they were in an intervention or in a control group. Baseline characteristics were not reported.)*
1b. Bias arising from the timing of identification and recruitment of individual participants in relation to timing of randomisation	Risk of bias judgement for the timing of identification and recruitment of individual participants in relation to timing of randomisation	Low *(Participants were recruited after randomisation of clusters. No information about baseline imbalance.)*
2. Bias due to deviations from intended interventions (If your aim is to assess the effect of assignment to intervention, answer the following questions).	Risk of bias judgement for deviations from intended interventions	Low *(Facilitators and parents were aware of the trial and study and assigned intervention. Therefore, there were unlikely deviations from the intended intervention nor individuals or clusters analysed in different groups to allocation.)*
3. Bias due to missing outcome data	Risk of bias judgement for missing outcome data	High *(309/1589 (19.4%) missing completed questionnaire at baseline; no explanation given. For BMI outcome: 178/1280 (14%) dropped out at follow-up due to absence on the day of the measurement or change of school. For diet outcomes: 586/1280 (45.8%) dropped out at follow-up. Reasons for dropping out for the questionnaire were not specified. Proportionally loss to follow-up for all outcomes of interest was slightly higher in intervention arms. No information if sensitivity analyses were not performed for all outcomes with missing data.)*
4. Bias in measurement of the outcome	Risk of bias judgement for measurement of the outcome	Some concerns *(Low for BMI z-score outcome: no information if staff measuring height and weight were aware of the intervention received by study*

Section	Question	Answer
		participants. These measures are objective and quite likely would not introduce bias. Some concerns for all dietary outcomes: dietary intake was self-reported (subjective outcome).)
5. Bias in selection of the reported result	Risk of bias for selection of the reported result	Low *(Reported outcome data not likely to have been selected from results of multiple analyses.)*
Overall bias and Directness	Risk of bias judgement	High
Overall bias and Directness	Overall Directness	Partially applicable *(Not clear how many children were >5 years old.)*

BMI: body mass index; BMI z-score: body mass index z-score; NGA: National Guideline Alliance; RoB: risk of bias.

Duncanson, 2013

Bibliographic Reference	Duncanson, K.; Burrows, T.; Collins, C.; Effect of a low-intensity parent-focused nutrition intervention on dietary intake of 2- to 5-year olds; Journal of Pediatric Gastroenterology and Nutrition; 2013; vol. 57 (no. 6); 728-734

Study details

Country/ies where study was carried out	Australia
Study type	Randomised controlled trial (RCT)
Study dates	Not reported

Inclusion criteria	• Parent aged 18 years or over (mother, father or primary carer), from designates study localities or surrounding areas • eldest child in family aged between 2 to 5 years (inclusive) • no chronic health condition that affected dietary intake.
Exclusion criteria	• Parent under 18 years old • Child aged under two years or over six years • Child commenced primary school • had a chronic disease, such as coeliac disease or a food allergy that has a significant effect on dietary intake • Additional study children from the same family.
Patient characteristics	**Child age, mean (SD), years** Intervention = 4.00 (0.13) Control = 4.04 (0.91) **Child indigenous status, n** **Aboriginal** Intervention = 2 Control = 3 **Neither Aboriginal or Torres Strait Islander** Intervention = 73 Control = 68

	Child health, n **No chronic condition** Intervention = 74 Control = 69 **Chronic condition** Intervention = 1 Control = 2 **Child care, n** **In some form of care** Intervention = 69 Control = 65 **No formal care** Intervention = 6 Control = 6 **Parent age, n** **Younger than 30 years** Intervention = 20

	Control = 12 **30 years or older** Intervention = 56 Control = 59 **Parent education, n** **Secondary educated** Intervention = 33 Control = 33 **Tertiary educated** Intervention = 42 Control = 38 **Parent sex, n** **Male** Intervention = 0 Control = 1 **Female** Intervention = 75 Control = 70

	Parent indigenous status, n **Aboriginal** Intervention = 1 Control = 2 **Neither Aboriginal or Torres Strait Islander** Intervention = 74 Control = 69
Intervention(s)/control	**Intervention: Dissemination of the Tummy Rumbles interactive CD and the Raising Children DVD at baseline , accompanied by written instructions for optimal use**. The only prompt provided to parents to use the resources was a reminder note delivered by post with the 3-month follow-up surveys. No further prompting of parents was conducted. 1. **Tummy Rumbles interactive CD** is a self-direct resource adapted from an early childhood nutrition education program for childcare staff and parents, divided into modules that include: • the 5 food groups, • dietary fats, • fussy eaters, • healthy lunchbox ideas, • food budgeting • reading food labels.

2. **Raising Children** is a guide to parenting from birth to 5 years and the content is based on the principles of the Raising Children Web site, Australia's definitive parenting resource, containing different sections – newborn, baby and child. Participants were asked to view the child section particularly the sections on:

- eating strategies,
- junk food,
- behaviour encouragement,
- choking risk minimisation,
- play, and
- learning.

[This fall into category intervention 1 in the protocol].

Components of intervention:

- **component 1: mode of delivery –** Visual (CD/DVD)
- **component 2: intervention aimed at individuals or groups –** Individual based
- **component 3: individualised /tailored interventions or general –** General, aimed to all the population of interest
- **component 4: who delivers the intervention –** Not reported
- **component 5: where is the intervention delivered –** In individual's own time
- **component 6: behaviour change models, techniques and theories –** No theory mentioned.

	Control: A generic nutrition brochure and the Active Alphabet physical activity resource were distributed to the control group to simulate real-life exposure
Duration of follow-up	Immediately post-intervention. Intervention period 12 months
Sources of funding	Not industry funded
Sample size	N = 146 Intervention = 75 Control = 71

CD: Compact Disk; DVD: Digital Versatile Disk; n: number of participants; SD: standard deviation.

Study arms

Intervention: information provision (n = 75)

Control: generic nutrition information (n = 71)

Outcomes

Nutritional outcomes reported post-12-month intervention

Outcome	**Intervention: information provision, n = 45**	**Control: generic nutrition information, n = 43**
Sweet drinks (KJ) Mean (SD)	186 (199)	125 (167)

Outcome	Intervention: information provision, n = 45	Control: generic nutrition information, n = 43
Fruit (serves per day) 1 serve = 150g. Serves of fruit per day (at 3 months) reported in Hodder 2020 Mean (SD)	1.4 (0.8)	1.7 (0.9)
Vegetables (serves per day) 1 serve = 75g Mean (SD)	1.3 (0.6)	1.41 (0.64)
Total fats (g) MD (95% CI)	-5.1 (-10.9 to 0.6)	-2.2 (-7.6 to 3.2)
Saturated fats (g) MD (95% CI)	-2.5 (-5.4 to 0.6)	-1.6 (-4.8 to 1.6)
Sugars (g) MD (95% CI)	-7.7 (-20.6 to 5.26)	-1.6 (-11.7 to 8.5)

CI: confidence interval; g: grams; KJ: kilojoule; MD: Mean Difference; SD: standard deviation.

The retention rate was 79% (n = 116) at 3 months and 60% (n = 87) at 12 months. The primary intention-to-treat analysis involved all participants who are randomly assigned and complete baseline and 3 month and/or twelve month surveys, regardless of whether they reported using the resources.

Critical appraisal – NGA Critical appraisal – Cochrane RoB 2.0 – standard RCT (domain-based summaries)

Section	Question	Answer
Domain 1: Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	Low *(Randomised was a blinded process, matching sequentially numbered unopened returned baseline survey envelopes with computer-generated random number. No reported differences in participants characteristics.)*
Domain 2a: Risk of bias due to deviations from the intended interventions (effect of assignment to intervention)	Risk of bias for deviations from the intended interventions (effect of assignment to intervention)	Low *(Participants were blinded to group allocation throughout the trial. Random effects modelling was used as the intention-to-treat analysis to perform assessment)*
Domain 3. Bias due to missing outcome data	Risk-of-bias judgement for missing outcome data	Some concerns *(Missing outcome data for 40% of participants at 12 months)*
Domain 4. Bias in measurement of the outcome	Risk-of-bias judgement for measurement of the outcome	Low *(Although outcomes were self-reported, outcome assessors (participants) were not aware of assigned intervention group)*
Domain 5. Bias in selection of the reported result	Risk-of-bias judgement for selection of the reported result	Low
Overall bias and Directness	Risk of bias judgement	Some concerns *(Some concerns around missing outcome data (40%). Although intention-to-treat analysis was used, study reported outcomes for with follow-up numbers (Table 6). The primary intention-to-treat analysis involved all participants who are randomly assigned and complete baseline and 3 month and/or twelve month surveys, regardless of whether they reported using the resources.)*
Overall bias and Directness	Overall Directness	Directly applicable

Section	Question	Answer
Overall bias and Directness	Risk of bias variation across outcomes	NA

NA: not applicable; NGA: National Guideline Alliance; RCT: randomised controlled trial; RoB: risk of bias.

Gans, 2022

Bibliographic Reference	Gans, KM; Tovar, A; Kang, A; Ward, DS; Stowers, KC; von Ash, T; Dionne, L; Papandonatos, GD; Mena, N; Jiang, Q; et, al.; A multi-component tailored intervention in family childcare homes improves diet quality and sedentary behavior of preschool children compared to an attention control: results from the Healthy Start-Comienzos Sanos cluster randomized trial; International journal of behavioral nutrition and physical activity; 2022; vol. 19 (no. 1); 45

Study details

Country/ies where study was carried out	USA
Study type	Cluster randomised controlled trial
Study dates	October 2015 – June 2019
Inclusion criteria	Children: • 2–5 years old • attending the Family child care homes (FCCH) for at least 10 h per week and eating at least one meal and one snack prepared by the Family child care providers (FCCP) during their time at the FCCH • received written consent from the parent to have their diet observed by project staff

	• wear an accelerometer activity monitor and/or undergo anthropometric measurements. FCCPs: • must be within 60 miles of Providence, in Rhode Island • have been operating a FCCH for at least 6 months with plans to remain in operation for at least 1 year • read and speak Spanish or English • cannot plan to close their FCCH for more than 3 consecutive weeks during the year following their 111rocessin in the study.
Exclusion criteria	Not reported
Patient characteristics	**Child's age, % (n), years** (mean (SD): NR): 2-years old = 37 (156) 3-years old = 30 (128) 4-5 years old = 33 (139) **Child's ethnicity, % (n):** Latinx = 55 (233) No Latinx = 43 (181) Missing = 2 (9) **Child's race, % (n):** White = 46 (195) Black = 10 (41) Asian = 1 (4)

	American Indian = 1 (4) Native Hawaiian = 1 (4) Others / >1 race = 39 (163) Missing = 3 (12) **FCCP ethnicity, % (n):** Hispanic = 67.2 (80) Non-Hispanic = 32.8 (39) **FCCP country of origin % (n):** USA = 29.4 (35) Outside of USA = 70.6 (84) **FCCP education, % (n):** Less than high school = 10.1 (12) High school = 32.8 (39) Some college = 38.7 (46) Bachelor's or Master's Degree = 18.5 (22) **FCCP household income % (n):** Less than $25000 = 12.6 (15) $25001 - $50000 = 47.9 (57) $50001 - $75000 = 20.2 (24) $75001 - $100000 = 10.1 (12)

	$100001 or more = 5.9 (7) Missing = 3.4 (4)
Intervention(s)/control	**Intervention** and **control** included components: 1. monthly support from a support coach 2. tailored materials including a tailored report, newsletters and videos 3. in-person group meetings 4. a set of active toys. **Control** content related to reading readiness and early literacy skills rather than nutrition and PA. FCCPs are assigned a lay support coach who has been trained in either the nutrition/physical activity (**Intervention group**) or literacy/reading readiness (**Control group**) content. Intervention was delivered over 8 months
Duration of follow-up	Immediately post-intervention
Sources of funding	Not industry funded
Sample size	N = 119 FCCP Intervention = 60 FCCP Control = 59 FCCP N = 377 children with at least one measure (n = 423 consented children)

	Intervention = 187 Control = 190 Sample size adjustment for clustering effect ICC = 0.014 (as used in Cochrane review (Hodder 2020) when studies did not report ICC) FCCPs analysed: Intervention = 42, Control = 47 Design effect = 1 + (average cluster size – 1) x ICC = 1+(89-1) x 0.014 = **2.232**
Other information	Study reported HEI scores for different food groups for example total fats, added sugars, vegetables etc but only the overall HEI score has been extracted and analysed in this review.

ICC: intracluster correlation coefficient; HEI: Healthy Eating Index; n: number of participants; NR: not reported; SD: standard deviation.

Study arms

Intervention (n = 187)

Cluster = 60 FCCP

Control (n = 190)

Cluster = 59 FCCP

Outcomes

Diet outcomes in children

Outcome	Intervention, n = 84	Control, n = 85
HEI score Mean (SD)	64.7 (11.1)	60.4 (12)

HEI: Healthy Eating Index; SD: standard deviation.

Group numbers (n) reported are adjusted for cluster effect. Original values Intervention n= 187; Control n= 190

Critical appraisal – Cochrane Risk of Bias tool (RoB 2.0) Cluster randomised trials NGA

Section	Question	Answer
1a. Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	Low *(Allocation sequence is based on primary language spoken and number of age eligible children in their FCCH. No information on allocation sequence concealment. No individual level significant differences at baseline.)*
1b. Bias arising from the timing of identification and recruitment of individual participants in relation to timing of randomisation	Risk of bias judgement for the timing of identification and recruitment of individual participants in relation to timing of randomisation	Low *(Participants were identified before randomisation. No significant differences between groups at baseline.)*
2. Bias due to deviations from intended interventions (If your aim is to assess the effect of assignment to intervention, answer the following questions).	Risk of bias judgement for deviations from intended interventions	Low *(Facilitators were aware of the trial and study. Evaluation staff members were not informed of the intervention group assignment. There were unlikely deviations from the intended intervention nor individuals or clusters analysed in different groups to allocation.)*

Section	Question	Answer
3. Bias due to missing outcome data	Risk of bias judgement for missing outcome data	Some concerns *(46/423 (11%) children did not receive allocated intervention due to withdrawal. Reasons for withdrawal were not stated. Data missing (after excluding those who did not receive allocated intervention) 7/377 (1.9%) children for all diet outcome analysis. No information given on intervention and control groups individually.)*
4. Bias in measurement of the outcome	Risk of bias judgement for measurement of the outcome	Low *(Data collectors observed all meals/snacks during the observation minimising bias rising from subjective outcome. Evaluation staff members were not informed of the intervention group assignment.)*
5. Bias in selection of the reported result	Risk of bias for selection of the reported result	Low *(Reported outcome data not likely to have been selected from results of multiple analyses.)*
Overall bias and Directness	Risk of bias judgement	Some concerns
Overall bias and Directness	Overall Directness	Directly applicable

FCCH: Family child care homes; NGA: National Guideline Alliance; RoB: risk of bias.

Haire-Joshu, 2008

Bibliographic Reference	Haire-Joshu, D; Elliott, MB; Caito, NM; Hessler, K; Nanney, MS; Hale, N; Boehmer, TK; Kreuter, M; Brownson, RC; High 5 for Kids: the impact of a home visiting program on fruit and vegetable intake of parents and their preschool children; Preventive medicine; 2008; vol. 47 (no. 1); 77-82

Study details

Country/ies where study was carried out	USA
Study type	Cluster randomised controlled trial
Study dates	2001 to 2006
Inclusion criteria	Not reported. 16 PAT programs from rural, southeast Missouri were identified and recruited into the study. Within these sites, 2012 families enrolled in PAT were assessed for eligibility and willingness to participate by parent educators. Of these, 444 families were excluded due to refusal to participate or other reasons. The remaining 1658 families with a preschool-aged child (ages 2 to 5 years old) participated in the H5-KIDS study.
Exclusion criteria	Not reported
Patient characteristics	**Child age, %** (mean (SD): NR) **1 – 3 years** Intervention = 67.3 Control = 60.5 **4 – 6 years** Intervention = 32.7 Control = 39.5 **Parent age, %** (mean (SD): NR) **< 25years**

	Intervention = 27.8 Control = 20.7 **25-29 years** Intervention = 34.7 Control = 32.7 **30-34 years** Intervention = 21.0 Control = 24.1 **>35 years** Intervention = 16.5 Control = 22.5 **Educational attainment, %** **Not high school graduate** Intervention = 15.9 Control = 11.4 **High school graduate** Intervention = 37.7 Control = 37.7 **Some college**

	Intervention = 26.1 Control = 26.0 **College graduate** Intervention = 20.3 Control = 25.0 **Annual household income, %** **<$20,000** Intervention = 29.5 Control = 25.2 **$20,000 - $35,000** Intervention = 30.0 Control = 25.0 **$35,000 - $50,000** Intervention = 13.1 Control = 17.9 **≥$50,000** Intervention = 27.5 Control = 31.9

	Race, % **White race** Intervention =86.3 Control = 79.7
Intervention(s)/control	**Intervention: Standard PAT program plus the High 5 for Kids (H5-KIDS).** 1. **Standard PAT program** aimed to encourage positive parent-child communication and increasing parents' knowledge of ways to stimulate childrens' social and physical development. Parent educators deliver a standardised curriculum via at least five home visits (or more in underserved families), on-site group activities, and newsletters. Services are provides during pregnancy and until the youngest child in the home is 3 years of age but extends services until the youngest child is 5 years of age in the case of underserved families. 2. **"H5-KIDS had content consistent with the PAT program and was comprised of three components:** o a tailored newsletter: parents were first formally enrolled in H5-KIDS and completed a pretest interview. Relevant data was then imported into an in-house computer based tailoring program. Each newsletter began with a bulleted tailored statement that included the self-reported servings of FVs the parent and the child consumed per day. Additional parent data (for example FV knowledge, parental role modelling, noncoercive parenting skills, FV availability) were each uniquely used to individualize messages and describe the themes of each of the four storybook sets the family would receive at their home visits. Newsletters were mailed to the parent's home at the beginning of the program. o a series of home visits: Parent educators delivered four H5-KIDS home visits, each of which addressed the core program areas (knowledge, parental modelling of fruit and vegetable intake, noncoercive feeding practices, fruit and vegetable availability). Each visit provided examples of parent-child activities designed around healthy nutrition, that the parent could use to promote the child's language and cognitive ability, and fine and gross motor skill development (for example having the child learn the names and colours of various FV). As part of each visit, parents also received materials and informational handouts with suggestions for improving feeding practices and the food environment in the home. Each home visit was designed to last 60 minutes.

	○ materials for the parent and child, including storybook: At each home visit, children received a H5-KIDS sing-a-long storybook with audio cassette tape and a colouring book. Each story book reinforced one of the core areas of the H5-KIDS program through the use of child friendly characters and appealing storylines presented through songs. [This falls into category intervention 1 in the protocol] **Components of intervention:** • **component 1: mode of delivery –** face-to-face, printed and audio • **component 2: intervention aimed at individuals or groups –** individual based • **component 3: individualised /tailored interventions or general –** on demand, tailored interventions based on needs and general interventions • **component 4: who delivers the intervention –** healthy eating and drinking practices 'champion' – Parent educators • **component 5: where is the intervention delivered –** during home visits • **component 6: behaviour change models, techniques and theories –** social cognitive theory and an ecological framework. **Control:** standard PAT program only (usual care)
Duration of follow-up	Not reported. Average time between pre-test and post-test = 7 months (range = 6 to 11 months)
Sources of funding	Not industry funded

Sample size	N = 1658 Intervention n = 759 Control n = 899 Sample size adjustment for clustering effect. Study reported that “There was minimal impact of grouping by site on the principle measures of impact in this study (ICC child fruit and vegetable servings=.00095 and ICC parent fruit and vegetable servings=.01). Therefore, the analyses did not adjust for group.” An analysis adjusting for clustering effect was therefore not performed.
Other information	Study further stratified outcomes by overweight and normal weight children, but did not provide numbers for these groups of children and therefore, the data could not be used.

ICC: intracluster correlation coefficient; n: number of participants; NR: not reported; PAT: Parent As Teachers; SD: standard deviation; USA: United States of America.

Study arms

Intervention: Standard PAT plus H5-KIDS (n = 759)

Control: Standard PAT program (n = 899)

Outcomes

Nutritional outcomes

Outcome	Intervention: Standard PAT plus H5-KIDS versus Control: Standard PAT program, n2 = 701, n1 = 605
Fruit and vegetable intake Adjusted for parent's age and education, and baseline FV intake Adjusted mean change	0.12
Parent's fruit and vegetable knowledge Adjusted mean change	0.14
Parent's fruit and vegetable modelling Adjusted mean change	0.21
Parent's behaviour – fruit and vegetable availability in home Adjusted mean change	0.19
Non-coercive child-feeding practices Adjusted mean change	-0.12

FV: fruit–vegetable; PAT: Parent As Teachers.

Critical appraisal – Cochrane Risk of Bias tool (RoB 2.0) Cluster randomised trials NGA

Section	Question	Answer
1a. Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	Low

Section	Question	Answer
1b. Bias arising from the timing of identification and recruitment of individual participants in relation to timing of randomisation	Risk of bias judgement for the timing of identification and recruitment of individual participants in relation to timing of randomisation	Low
2. Bias due to deviations from intended interventions (If your aim is to assess the effect of assignment to intervention, answer the following questions).	Risk of bias judgement for deviations from intended interventions	Some concerns *(Cluster sites were not blinded to the assignment, and therefore likely that participants were aware of their assigned intervention, which could introduce bias)*
3. Bias due to missing outcome data	Risk of bias judgement for missing outcome data	Some concerns *(Missing outcome data from 16% of participants, which was not accounted for in analysis)*
4. Bias in measurement of the outcome	Risk of bias judgement for measurement of the outcome	High *(Outcomes were self-reported and participants were aware of the intervention received)*
5. Bias in selection of the reported result	Risk of bias for selection of the reported result	Low
Overall bias and Directness	Risk of bias judgement	High *(Concerns around blinding (participants were aware of the intervention received), measurement of outcomes (outcomes were self-reported) and missing outcome data (outcome data was missing for 16% of participants, which was not accounted for in the analysis))*
Overall bias and Directness	Overall Directness	Directly applicable

NGA: National Guideline Alliance; RoB: risk of bias.

Harris, 2022

Bibliographic Reference	Harris, J.L.; Phaneuf, L.; Fleming-Milici, F.; Effects of Sugary Drink Countermarketing Videos on Caregivers' Attitudes and Intentions to Serve Fruit Drinks and Toddler Milks to Young Children; American journal of public health; 2022; vol. 112 (no. s8); 807-s816

Study details

Country/ies where study was carried out	USA
Study type	Randomised controlled trial (RCT)
Study dates	January 2021
Inclusion criteria	Caregivers: • have children aged 9–36 months • with quotas for Hispanic and Black (150 participants each) and oversampling of Asian American caregivers.
Exclusion criteria	Not reported
Patient characteristics	**Child's age, n (%), months:** 8 – 12 = 122 (20.3) 13 – 24 = 231 (38.5) 25 – 37 = 247 (41.2) **Caregiver's education level n (%)*** (mean (SD): NR) High school or less = 161 (26.8)

	Some college or 2-y degree = 223 (37.2) 4-y college degree = 135 (22.5) Higher or professional degree = 80 (13.3) Caregiver's born in United States = 536 (89.3) Caregiver's Hispanic ethnicity = 155 (25.8); non-Hispanic = 445 (74.2) **Caregiver's race n (%)*** White only = 276 (46.0) Black only = 195 (32.5) Asian only = 60 (10.0) Mixed or other = 47 (7.8) *Not all percentages add up to 100% because of missing responses
Intervention(s)/control	**Intervention:** 2 sugary drink counter-marketing videos presented information to counteract common misperceptions about children's fruit drinks and toddler milks in a positive and entertaining manner. The fruit drink video provided information about ingredients, including added sugar, fruit juice, and diet sweetener content. The toddler milk video defined the products and stated that they contain added sugar, cost 4 times more as plain milk, and their marketing claims are not supported by science. **Control:** 2 control videos contained information about limiting screen time and caregivers co-viewing screens with their child. Control videos were selected to match the sugary drink videos in tone, age of child, and production quality.

	All videos were less than 60 seconds, addressed caregivers of toddlers and designed to be shared on social media. Both videos stated that pediatricians do not recommend them and concluded with the message that plain milk and water are the only drinks that toddlers need.
Duration of follow-up	Immediate post-intervention
Sources of funding	Industry funded
Sample size	N = 600 caregivers Intervention = 302 Control = 298

n: number of participants; NR: not reported; SD: standard deviation.

Study arms

Intervention video (n = 302)

Control video (n = 298)

Outcomes

Sugar drink intake in children 9-36 months

Outcome	**Intervention video, n = 302**	**Control video, n = 298**
Attitudes about fruit drinks (1-10 scale) – overall positive Average of harmful to beneficial, foolish to wise, bad to good. Mean (SD)	4.74 (2.5)	5.67 (2.48)

Outcome	Intervention video, n = 302	Control video, n = 298
Attitudes about toddler milk – overall positive Mean (SD)	4.88 (2.93)	6.98 (2.36)
Intent to serve fruit drinks Mean (SD)	13.13 (1.7)	3.63 (1.69)
Intent to serve toddler milk Mean (SD)	2.75 (1.86)	3.67 (1.78)
Intent to cut back on fruit drinks "In the next month, I plan to cut back on serving [fruit drinks/toddler milks] to my child" was asked among those who reported serving fruit drinks (n = 397) or toddler milks (n = 299) in the past week Mean (SD)	4.25 (1.43)	4.01 (1.46)
Intent to cut back on toddler milk "In the next month, I plan to cut back on serving [fruit drinks/toddler milks] to my child" was asked among those who reported serving fruit drinks (n = 397) or toddler milks (n = 299) in the past week Mean (SD)	4.14 (1.63)	3.52 (1.73)

SD: standard deviation.

Critical appraisal – NGA Critical appraisal – Cochrane RoB 2.0 – standard RCT (domain-based summaries)

Section	Question	Answer
Domain 1: Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	High *(No information concerning randomisation methods. To disguise the intent of the survey, participants answered similar questions about their child's use of TV and other screens. Baseline characteristics for intervention and control groups individually were not reported.)*
Domain 2a: Risk of bias due to deviations from the intended interventions (effect of assignment to intervention)	Risk of bias for deviations from the intended interventions (effect of assignment to intervention)	Low *(Participants were likely not aware of the assigned intervention. It was not reported whether any deviations from intended intervention occurred due to the experimental context. 65/665 (9.8%) participants excluded after randomisation and before intervention due to did not complete the survey, answered questions about child who did not meet age range requirements or provided implausible responses.)*
Domain 3. Bias due to missing outcome data	Risk-of-bias judgement for missing outcome data	Low *(Data for the outcomes were available for all participants randomised.)*
Domain 4. Bias in measurement of the outcome	Risk-of-bias judgement for measurement of the outcome	Some concerns *(Outcomes were reported using mothers' self-reported questionnaire (subjective outcome).)*
Domain 5. Bias in selection of the reported result	Risk-of-bias judgement for selection of the reported result	Low *(Reported outcome data not likely to have been selected from results of multiple analyses.)*
Overall bias and Directness	Risk of bias judgement	High *(No information on randomisation process and some concerns around the measurement of outcomes)*
Overall bias and Directness	Overall Directness	Directly applicable

Section	Question	Answer
Overall bias and Directness	Risk of bias variation across outcomes	N/A

N/A: not applicable; NGA: National Guideline Alliance; RCT: randomised controlled trial; RoB: risk of bias.

Hodder, 2020

Bibliographic Reference	Hodder, R.K.; O'Brien, K.M.; Tzelepis, F.; Wyse, R.J.; Wolfenden, L.; Interventions for increasing fruit and vegetable consumption in children aged five years and under; Cochrane Database of Systematic Reviews; 2020; vol. 2020 (no. 5); cd008552

Study details

Country/ies where study was carried out	Studies included in systematic review were conducted in: USA = 35 UK = 15 Netherlands = 9 Australia = 5 Belgium = 3 Germany = 2 Korea = 2 Turkey = 1 Norway = 1 Denmark = 1

	Mexico = 1 France = 1 Spain = 1 Honduras = 1 India = 1 UK, Greece and Portugal = 1 Data from 34 studies from the review were included in this review and analysis has been updated with 13 individual studies. Data from studies conducted in non- OECD high income countries that were included in the systematic review were not included in this review. The studies included from this review are: Blissett 2016 Cooke 2011 Cravener 2015 Daniels 2014, Daniels 2015 and Magarey 2016 De Coen 2012 Duncanson 2013 Farrow 2019 Fildes 2014 Haire-Joshu 2008 Heath 2014

	Hong 2018 Keller 2012 Kim 2018 Kobel 2019 Kristiansen 2019 Lee 2015 Namenek Brouwer 2013 Nekitsing 2019 Nicklas 2017 O'Connell 2012 Owen 2018 Remington 2012 Roset-Salla 2016 Skouteris 2015 Smith 2017 Staiano 2016 Tabak 2012 Verbestel 2014 Vereecken 2009 Wardle 2003

	Watt 2009 and Scheiwe 2010 Wyse 2012 and Wolfenden 2014 Zeinstra 2017 Zeinstra 2018
Study dates	Systematic review search dates: 1947 to January 2020
Inclusion criteria	Criteria for inclusion of studies into the review: RCTs, including cluster-randomised controlled trials (C-RCTs) and cross-over trials, comparing two or more alternative intervention programmes or an intervention programme comparing with a standard-care or no-intervention control group to increase the consumption of fruit or vegetables or both of children aged five years and under.
Exclusion criteria	Trials that did not include fruit or vegetable intake as a primary trial outcome.
Patient characteristics	See Appendix L for individual study characteristics
Intervention(s)/control	Extracted from systematic review: **types of interventions:** any educational, experiential, health promotion and/or psychological or family or behavioural therapy or counselling or management or structural or policy or legislative reform interventions, designed to increase consumption of fruit or vegetables or both in children aged five years and under(as defined in types of participants). Interventions could be conducted in any setting including the home, childcare/preschool services, health services, or community settings. **Comparison:** Any alternative intervention to encourage fruit and vegetable consumption as described above, or a non-intervention control, usual care, or attention control or wait-list control. Attention controls in randomised trials for behavioural interventions are those that include clinical attention and induce the expectation of therapeutic benefit for control for non-specific effects of the intervention (Freedland2011).

	Wait-list control groups that are also designed to control for non-specific effects involve participants being allocated to receive an intervention at trial conclusion (delayed start) (Whitehead 2004).
Duration of follow-up	Post-intervention range in systematic review: immediate to 3.5 years
Sources of funding	Not industry funded
Sample size	N = 12,965 from 80 trials with 218 trial arms

n: number of participants; OECD: The Organization for Economic Cooperation and Development; USA: United States of America; UK: United Kingdom.

Study arms

Child feeding intervention (n = 1134)

Parent nutrition education (n = 1497)

Multicomponent intervention (n = 1568)

No intervention (n = 3952)

Combined 'no intervention' group for all three intervention groups

Outcomes

- **Fruit and vegetable intake**

See relevant study entries in Appendices E and F for outcome data.

Critical appraisal – NGA Critical appraisal – ROBIS checklist

Section	Question	Answer
Study eligibility criteria	Concerns regarding specification of study eligibility criteria	Low
Identification and selection of studies	Concerns regarding methods used to identify and/or select studies	Low
Data collection and study appraisal	Concerns regarding methods used to collect data and appraise studies	Low
Synthesis and findings	Concerns regarding the synthesis and findings	Low
Overall study ratings	Overall risk of bias	Low
Overall study ratings	Applicability as a source of data	Fully applicable

NGA: National Guideline Alliance; ROBIS: Risk of Bias in Systematic Reviews.

Kobel, 2019

Bibliographic Reference	Kobel, S.; Wartha, O.; Lammle, C.; Dreyhaupt, J.; Steinacker, J.M.; Intervention effects of a kindergarten-based health promotion programme on obesity related behavioural outcomes and BMI percentiles; Preventive Medicine Reports; 2019; vol. 15; 100931

Study details

Country/ies where study was carried out	Germany
Study type	Cluster randomised controlled trial
Study dates	2016-2017
Inclusion criteria	Cluster level:

	all kindergartens in southwest Germany which have not previously participated in the program. Individual level: • children aged between 3 and 5 years old at baseline • parental signed consent.
Exclusion criteria	Not reported
Patient characteristics	**Child age (mean ± SD), years** Total = 3.6 (0.6) Intervention = 3.6 (0.6) Control = 3.6 (0.5) **Race/Ethnicity n (%)** NR **Socioeconomic characteristics: Migration background* n (%)** Total = 151 (33.4) Intervention = 77 (30.6) Control = 74 (37.0) Missing = 106 *defined as at least one parent born abroad or child was spoken to in a language other than German for first three years of life. **Parental education** NR

	Parental age NR
Intervention(s)/control	**Intervention:** health promotion program delivered to kindergarten children (3-6 years of age) focusing on promotion of physical activity, lowering screen media consumption and promotion of healthy diet by reducing sugar sweetened beverages and increasing fruit and vegetable consumption. Based on Bandura's social cognitive theory and a social ecological approach. The intervention consisted of: 1. kindergarten classroom materials: 20 exercise and games and 30 ready to use ideas, action alternatives and lessons to increase physical activity, motor skills and knowledge about body, health and healthy eating (including games, exercise breaks and cooking); short activity games (5-7 min, twice daily) to increase motor skills. Delivered by teachers and in the classroom setting. 2. caregiver materials: letters delivered to caregivers in three languages with homework materials and intervention templates of two parent evenings. This included information and advice on how to help support a healthy lifestyle for their children. 3. teacher materials: Instructional and behavioural educational resources for teachers with two rounds of 16 hour training sessions by other trained teachers. **Control:** Usual kindergarten care with no contact throughout the year.
Duration of follow-up	1 year
Sources of funding	Not industry funded
Sample size	N=973

	Intervention n = NR Control n = NR No of clusters (kindergartens) = 57 Intervention cluster n = 30 Control cluster n= 27 N individuals at follow-up N = 558 Intervention n = 318 Control n = 240 Cluster numbers at follow-up are not reported Adjusted sample size using ICC=0.015 (as used in Hodder 2020) 1+ (No of clusters -1) x ICC = 1.84
Other information	Name of the health promotion program: “Join the Healthy Boat” which is a state wide program.

ICC: intracluster correlation coefficient; n: number of participants; NR: not reported; SD: standard deviation.

Study arms

Intervention (n = 318)

Control (n = 240)

Cluster=NR

Outcomes

Outcome	Intervention, n = 173	Control, n = 130
BMI percentile after 1 year children in the intervention group displayed slightly higher BMIPCT values at baseline, compared to the children in the control group (51.9 ± 25.9 and 47.9 ± 25.9, respectively) Mean (SD)	48.7 (26.3)	48.4 (26.2)
Sugar-sweetened beverages ≥ daily, n (%) Adjusted for cluster effect No of events	n = 7; % = 5.9	n = 8; % = 7.9

BMI: body mass index; n: number of participants; NR: not applicable; SD: standard deviation.

Group numbers (n) reported are adjusted for cluster effect. Original numbers Intervention n = 318; Control n=240

Critical appraisal – Cochrane Risk of Bias tool (RoB 2.0) Cluster randomised trials NGA

Section	Question	Answer
1a. Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	High *(No information on method of randomisation or allocation sequence concealment. No individual level significant differences at baseline. No information on cluster level differences at baseline.)*

Section	Question	Answer
1b. Bias arising from the timing of identification and recruitment of individual participants in relation to timing of randomisation	Risk of bias judgement for the timing of identification and recruitment of individual participants in relation to timing of randomisation	Low *(Individuals were identified before randomisation. No significant differences between groups at baseline.)*
2. Bias due to deviations from intended interventions (If your aim is to assess the effect of assignment to intervention, answer the following questions).	Risk of bias judgement for deviations from intended interventions	Some concerns *(Parents were invited to participate in the study but no information if they were aware of the trial. Control group was not contacted throughout the year. No information on whether those delivering intervention were aware of assigned intervention. No information if deviations from intended intervention arose due to trial context.)*
3. Bias due to missing outcome data	Risk of bias judgement for missing outcome data	Some concerns *(No information at the cluster level provided on outcome data availability. There was missing data at baseline and follow-up at the individual level for relevant outcomes. Sensitivity analyses were not performed for all outcomes with missing data and unclear whether missingness in the outcome depended on it's true value.)*
4. Bias in measurement of the outcome	Risk of bias judgement for measurement of the outcome	Low *(Outcome assessers were probably aware of the trial but unlikely assessment of outcome influenced by knowledge of intervention received due to form of collection of outcome in terms of BMI measurement and questions from standardised questionnaire.)*
5. Bias in selection of the reported result	Risk of bias for selection of the reported result	Low *(Pre-specified protocol with analysis plan provided. Reported outcome data not likely to have been selected from results of multiple analyses.)*

Section	Question	Answer
Overall bias and Directness	Risk of bias judgement	High *(The study is judged to be at high risk of bias in at least one domain for this result.)*
Overall bias and Directness	Overall Directness	Directly applicable

BMI: body mass index; NGA: National Guideline Alliance; RoB: risk of bias.

Leis, 2020

Bibliographic Reference	Leis, A; Ward, S; Vatanparast, H; Humbert, ML; Chow, AF; Muhajarine, N; Engler-Stringer, R; Bélanger, M; Effectiveness of the Healthy Start-Départ Santé approach on physical activity, healthy eating and fundamental movement skills of preschoolers attending childcare centres: a randomized controlled trial; BMC public health; 2020; vol. 20 (no. 1); 523

Study details

Country/ies where study was carried out	Canada
Study type	Cluster randomised controlled trial
Study dates	2008-2010
Inclusion criteria	• Licensed early childhood centres (ECCs) in Saskatchewan and New Brunswick, Canada • Parental consent of child's involvement in program
Exclusion criteria	Exclusion criteria for early childhood centres (ECC):

	• Prior physical activity or nutrition intervention performed at ECC • No provision of lunch to children • <20 children enrolled full-time in a preschool program
Patient characteristics	**Child age (mean ± SD), years** Total=NR Intervention=4.1 (0.77) Control=4.1 (0.75) **Race/Ethnicity n (%)** NR **Level of socioeconomic deprivation** NR **Parental education** NR **Parental age** NR
Intervention(s)/control	**Intervention:** Based on a socioecological model and targeted at childcare educators to promote physical activity, fundamental motor skills and healthy diet within everyday preschool care for children (3-5 years of age) attending early childcare centres. The intervention delivered over 6 to 8 months consisted of:

	• 3 hour on-site training to childcare educators, directors and cooks delivered after work by dietitians, kinesiologists or other experts in nutrition and physical activity and covered best practices in early childhood physical activity and healthy eating. • provision of resources including implementation, physical activity and healthy eating manuals and an active play equipment kit. • continuous online and phone support and monitoring. Monthly newsletters with tips on increasing movement and improving healthy eating in children were provided and encouraged to be shared with parents. • 90 minute booster session halfway through the intervention which was tailored to the individual challenges faced by any ECCs. This was conducted by staff meeting, in-class demonstration, parent presentation, cooking class or brief staff training. **Control:** Usual practice with no provision of training, resources or support.
Duration of follow-up	1 to 3 months
Sources of funding	Not industry funded
Sample size	N=897 Child Intervention n = 464 Control n = 433 No of clusters (Early childcare centres (ECC)) = 61 Intervention cluster n = 30 Control cluster n = 31

	Design effect using 0.015 (average as defined in Hodder 2020) = 1.45
Other information	Healthy Start-Départ Santé cluster randomised controlled trial

n: number of participants; NR: not reported; SD: standard deviation.

Study arms

Child Intervention (n = 464)

Cluster = 31 ECC Child care centres

Control (n = 433)

Cluster = 30 ECC Child care centres

Outcomes

Child diet outcomes

Outcome	Child Intervention, n = 246	Control, n = 217
Servings of Fruits and vegetables intake Mean (SD)	0.81 (0.57)	0.76 (0.69)

SD: standard deviation.

Group numbers (n) reported are adjusted for cluster effect. Original values – Intervention n= 356; Control n = 314

Critical appraisal – Cochrane Risk of Bias tool (RoB 2.0) Cluster randomised trials NGA

Section	Question	Answer
1a. Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	Low *(Allocation was random and probably concealed. No individual level significant differences at baseline. No information on cluster level differences at baseline.)*
1b. Bias arising from the timing of identification and recruitment of individual participants in relation to timing of randomisation	Risk of bias judgement for the timing of identification and recruitment of individual participants in relation to timing of randomisation	Low *(Individuals were identified before randomisation. No significant differences between groups at baseline.)*
2. Bias due to deviations from intended interventions (If your aim is to assess the effect of assignment to intervention, answer the following questions).	Risk of bias judgement for deviations from intended interventions	Some concerns *(No information provided if parents/children were aware of the trial although they were aware of the study. Parents/children were not aware of their allocation. Early childcare centre directors are aware of the study and possibly trial and needed the parental board's support. After recruitment, the study combined two early child centres that were originally allocated to each arm into an intervention group as they shared the same director and staff. There was no information on numbers of children in these clusters to judge for potential for substantial impact of analysing participants in the wrong group on analysis.)*
3. Bias due to missing outcome data	Risk of bias judgement for missing outcome data	Low *(Reasons for missing outcome data between intervention and control arms were not provided although proportions of loss to follow-up for food outcomes of interest was similar between arms (intervention 16%, control 15%). A sensitivity analysis was performed for the total number of participants that were lost to follow-up compared to without and for food outcomes of interest, no significant differences were found.)*

Section	Question	Answer
4. Bias in measurement of the outcome	Risk of bias judgement for measurement of the outcome	Low *(Outcome assessors responsible for collecting data were blinded to the early childcare centre group allocations.)*
5. Bias in selection of the reported result	Risk of bias for selection of the reported result	Low *(Food outcome data was not likely to have been selected from multiple outcome measurements or analyses. The study used the weighting method to weigh what the child consumed during lunchtime accompanied by photographic methods before and after consumption on two consecutive weekdays.)*
Overall bias and Directness	Risk of bias judgement	Some concerns *(The study is judged to be at some concerns in at least one domain for this result.)*
Overall bias and Directness	Overall Directness	Directly applicable

NGA: National Guideline Alliance; RoB: risk of bias.

Magarey, 2016

Bibliographic Reference	Magarey A; Mauch C; Mallan K; Perry R; Elovaris R; Meedeniya J; Byrne R; Daniels L; Child dietary and eating behavior outcomes up to 3.5 years after an early feeding intervention: the NOURISH RCT; Obesity; 2016; vol. 7 (no. 24); 1537-45

Study details

Country/ies where study was carried out	Australia
Study type	Randomised controlled trial (RCT)

Study dates	2008-2009
Inclusion criteria	• First time mothers • Aged 18 years or older • Written and spoken English ability • Healthy term infants (35 gestational weeks or above and birth weight 2500 grams or above)
Exclusion criteria	None reported
Patient characteristics	**Child age at baseline (mean ± SD), months** Total = 4.3 (1.0) Intervention = 4.3 (1.0) Control = 4.3 (1.0) **Race/Ethnicity n (%)** NR **Socioeconomic Indexes for Areas Index of Relative Advantage and Disadvantage (relative disadvantage ≤7th decile)** Total = 33 (230) Intervention = 32 (113) Control = 34 (117) **Maternal Education n (%)** ***University degree***

	Total = 406 (58) Intervention = 207 (59) Control = 199 (58) **Maternal age at delivery (mean ± SD), years** Total = 30.1 (5.3) Intervention = 30.2 (5.3) Control = 29.9 (5.3)
Intervention(s)/control	**Intervention:** focused on anticipatory guidance on protective feeding behaviours. This involved responsive feeding based on child cues to promote self-regulation as well as encouraging consumption of healthy foods and reducing intake of energy-dense, nutrient-poor foods. Emphasis was placed on healthy consumption and growth and not obesity prevention. The intervention consisted of two modules, the first conducted at age 4-7 months and second at 13-16 months. Each module consisted of six sessions which were 1-1.5 hours each and delivered to 40 groups of participants over 12 weeks. Dietitians and psychologists were acted as co-facilitators of the sessions and were trained to use facilitator resources. At all time points of the study, mothers reported the child's diet to a trained dietitian by a 24 hour phone food recall and completed the Child Dietary Questionnaire when the child was 3.7 and 5 years of age. **Control:** families were able to go to usual child health services and could include services based on request such as infant weighing, or online and phone support services.
Duration of follow-up	3.5 years
Sources of funding	Partially industry funded (Industry funders: HJ Heinz and Meat and Livestock Australia)
Sample size	N = 698

	Intervention n = 352 Control n =3 46
Other information	The NOURISH RCT was conducted in two phases. In phase 1, the child was 4 months at baseline and followed to 14 months and 2 years (6 months after the end of the intervention). In phase 2, follow-up was conducted at child age 3.7 years and 5 years which was about 2 years and 3.5 years after the intervention finished, respectively. The present study focused on the follow-up of child from age 2 years onwards. Intervention was delivered in 12 week sessions for Modules 1 and 2 with a 6-moth gap in-between both modules. Daniels 2014, Daniels 2015 and Magarey 2016 are all NOURISH RCT studies but different outcomes extracted.

N: number of participants; NR: not reported; SD: standard deviation.

Study arms

Intervention (n = 352)

Control (n = 346)

Outcomes

Outcomes at 3.5 years follow-up post Module 2 intervention (child aged 5 years)

Outcome	Intervention, n = 352	Control, n = 346
Vegetable consumption at mean age (SD) 60.0 (0.5) months, g/kg body weight Estimated marginal mean (SE). Intervention n=213, Control n=211 at this time point. Custom value	6.6 (0.5)	5.9 (0.5)

Outcome	Intervention, n = 352	Control, n = 346
Fruit consumption at mean (SD) age 60.0 (0.5) months, g/kg body weight Estimated marginal mean (SE). Intervention n=213, Control n=211 at this time point. Custom value	11.1 (0.6)	10.4 (0.6)
Non-milk sweetened beverages at mean age (SD) 60.0 (0.5) months, % total energy intake Estimated marginal mean (SE). Intervention n=213, Control n=211 at this time point. Custom value	2.0 (0.5)	2.1 (0.5)
CDQ Non-milk sweetened beverage absolute score at mean age (SD) 60.0 (0.5) months (≤) Child Dietary Questionnaire (CDQ). Estimated marginal mean (SE). Target score: ≤1. Intervention n=213, Control n=211 at this time point. Custom value	0.6 (0.05)	0.5 (0.05)
CDQ Fruit and vegetable score absolute score at mean age (SD) 60.0 (0.5) months Child Dietary Questionnaire (CDQ). Estimated marginal mean (SE). Target score: ≥18. Discretionary foods according to the Australian Guide to Healthy Eating (AGHE) and excluding non-milk sweetened beverages which was reported separately. Intervention n=213, Control n=211 at this time point. EMM (SEM)	15.2 (0.3)	14.7 (0.3)

EMM: Effect measure modification; g: grams; kg: kilograms; n: number of participants; SEM: Standard Error of Mean; SD: standard deviation.

Study also reported outcomes at 6 months post Module 2 intervention (child age 2 years) and 2 years post module 2 intervention (child age 3.5 years). Longest follow-up data extracted and analysed

Critical appraisal – NGA Critical appraisal – Cochrane RoB 2.0 – standard RCT (domain-based summaries)

Section	Question	Answer
Domain 1: Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	Low *(Randomisation was performed by block permutation but method to select blocks was not reported. Randomisation was reported to be independently conducted and no baseline differences between groups was present.)*
Domain 2a: Risk of bias due to deviations from the intended interventions (effect of assignment to intervention)	Risk of bias for deviations from the intended interventions (effect of assignment to intervention)	Some concerns *(Participants and facilitators were probably aware of the intervention. There was one protocol violation but this was unlikely to impact the results.)*
Domain 3. Bias due to missing outcome data	Risk-of-bias judgement for missing outcome data	High *(Data for outcomes were not available for all or nearly all participants with discontinuation of participation in intervention and control at each follow-up point (age 2 years n=26 (7.4%), n=31 (9.0%); age 3.7 years n=27 (7.7%), n=10 (2.9%) and age 5 years n=43 (12.2%), n=37 (10.7%), respectively). No information is provided about discontinuation and it is unclear if missingness of outcome depended on the true value.)*
Domain 4. Bias in measurement of the outcome	Risk-of-bias judgement for measurement of the outcome	Low *(Validated questionnaires were provided to both arms. Outcome assessors were blind to allocation.)*
Domain 5. Bias in selection of the reported result	Risk-of-bias judgement for selection of the reported result	Low *(Prespecified protocol available)*
Overall bias and Directness	Risk of bias judgement	High *(The study is judged to be at high risk of bias in at least one domain for this result.)*
Overall bias and Directness	Overall Directness	Directly applicable

Section	Question	Answer
Overall bias and Directness	Risk of bias variation across outcomes	NA

n: number of participants; NA: not applicable; NGA: National Guideline Alliance; RCT: randomised controlled trial; RoB: risk of bias.

Nix, 2021

Bibliographic Reference	Nix, RL; Francis, LA; Feinberg, ME; Gill, S; Jones, DE; Hostetler, ML; Stifter, CA; Improving Toddlers' Healthy Eating Habits and Self-regulation: a Randomized Controlled Trial; Pediatrics; 2021; vol. 147 (no. 1)

Study details

Country/ies where study was carried out	USA
Study type	Randomised controlled trial (RCT)
Study dates	April 2013 to October 2013
Inclusion criteria	Eligible families: • had a toddler 18-36 months of age • at the time of the 3-month recruitment needed to be enrolled in home-based Early Head Start with 1 of the study's 3 community partners. • needed to have sufficient English to complete assessments.
Exclusion criteria	None reported

Patient characteristics	**Child age (mean ± SD), months** Total = 30.72 (6.96) Intervention = NR Control = NR **Race/Ethnicity n (%)** ***Non 153rocessi white*** Total = 35 (48) Intervention = NR Control = NR ***African American*** Total = 23 (29) Intervention = NR Control = NR ***Hispanic or Latinx*** Total = 18 (23) Intervention = NR Control = NR **Level of socioeconomic deprivation n (%)** ***Full time employed*** Total = 9 (11)

	Intervention = NR Control = NR **Maternal Education n (%)** ***Not graduated from high school*** Total= 23 (29) Intervention = NR Control = NR **Maternal age** NR
Intervention(s)/control	**Intervention:** Alternative material to Early Head Start program and included: • active coaching which was the focus of lessons. Home visitors provided 3-6 ingredients and coached on structured food preparation activities which involved the toddler. The activity was tailored in the case of allergies or for cooking equipment/facility restraints. The activity aimed to promote toddler self-regulation, sensitive scaffolding (based on parent-child interaction therapy techniques) and lessons were age appropriate for the toddler's skill levels. • didactic information to parents such as frequency of new food exposure before a toddler will eat it, relationship between sleep and emotional and or behavioural control and how this affects weight gain. • assisting parents to identify how new skills gained could be applied to other situations. Lessons were conducted at home on a weekly basis over 10 weeks by the usual Early Head Start home visitors attending to the family. Lessons took approximately 45 of the 90 minute home visits. Essential material that was missed from the usual program was delivered after the intervention.

	Control: Early Head Start usual material which aimed to encourage parents to foster their toddlers' cognitive, social-emotional, language, pre-literacy, numeracy, and physical development. Time and number of visits did not differ between groups.
Duration of follow-up	One week after the intervention period of 10 weeks. (Baseline values were collected ideally one week before the first lesson and post-treatment values ideally one week after the last session.)
Sources of funding	Not industry funded
Sample size	N = 73 Intervention n = 38 Control n = 35
Other information	Trial name Recipe 4 Success. Eligibility for the Early Head Start program was income below federal poverty threshold. Toddler ages ranged between 18-36 months and ages between arms at baseline were reported in text to not differ in statistical significance. About 78% of families in the study were enrolled in the Special Supplemental Nutrition Program for Women, Infants, and Children or the Supplemental Nutrition Assistance Program.

N: number of participants; NR: not reported; SD: standard deviation; USA: United States of America.

Study arms

Intervention (n = 38)

Control (n = 35)

Outcomes

Outcome	Intervention, n = 38	Control, n = 35
Healthy eating habits Percentage of meals and snacks over 3 days that included a fruit and/or vegetable, a source of protein, and no sweets or junk food (possible range = 0–1.00). Per protocol numbers intervention=36 and control=30. Mean (SD)	0.13 (0.12)	0.09 (0.08)

n: number of participants; SD: standard deviation.

Critical appraisal – NGA Critical appraisal – Cochrane RoB 2.0 – standard RCT (domain-based summaries)

Section	Question	Answer
Domain 1: Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	Low *(Allocation sequence was random and performed in Early Head Start centres. Unclear as to whether allocation was performed independently to the enrolment personnel. Baseline characteristics were not reported although child age was reported to be not statistically different between groups.)*
Domain 2a: Risk of bias due to deviations from the intended interventions (effect of assignment to intervention)	Risk of bias for deviations from the intended interventions (effect of assignment to intervention)	Some concerns *(Participants and home visitors were aware of assigned interventions and almost all home visitors had families in both conditions. 5% or more of participants in each arm were excluded from analysis (% analysed in intervention = 95% (36/38) and control = 86% (30/35)) due to moved out of state (n=1 for both arms), family disruption (n=1 for intervention only) or could*

Section	Question	Answer
		not be located (n=4 for control only). No information whether deviations arose because of the trial context.)
Domain 3. Bias due to missing outcome data	Risk-of-bias judgement for missing outcome data	Low *(Not all outcome data was available for participants in the intervention and control groups. It is unlikely that missingness in the outcome depended on it's true value, particularly for the outcome of responsive feeding practices which had greater missing outcome data due to video recording issues.)*
Domain 4. Bias in measurement of the outcome	Risk-of-bias judgement for measurement of the outcome	Low *(Methods of outcome measures were appropriate and researches that collected and coded data were blinded to allocation.)*
Domain 5. Bias in selection of the reported result	Risk-of-bias judgement for selection of the reported result	Some concerns *(The trial protocol was registered post-hoc.)*
Overall bias and Directness	Risk of bias judgement	Some concerns *(The study is judged to raise some concerns in at least one domain for this result, but not to be at high risk of bias for any domain.)*
Overall bias and Directness	Overall Directness	Directly applicable
Overall bias and Directness	Risk of bias variation across outcomes	NA

n: number of participants; NA: not applicable; NGA: National Guideline Alliance; RCT: randomised controlled trial; RoB: risk of bias.

O'Connell, 2012

Bibliographic Reference	O'Connell, ML; Henderson, KE; Luedicke, J; Schwartz, MB; Repeated exposure in a natural setting: a preschool intervention to increase vegetable consumption; Journal of the Academy of Nutrition and Dietetics; 2012; vol. 112 (no. 2); 230-234

Study details

Country/ies where study was carried out	USA
Study type	Randomised controlled trial (RCT)
Study dates	2007
Inclusion criteria	Children attending one of two private preschools.
Exclusion criteria	None reported
Patient characteristics	**Child age range, n (%)** (mean (SD): NR) ***4-5 years*** Total = 82 (85) Intervention = NR Control = NR **Race/Ethnicity n (%)** ***White*** Total = 66 (69) Intervention = NR Control = NR ***Asian***

	Total = 8 (8) Intervention = NR Control = NR ***African American*** Total = 5 (5) Intervention = NR Control = NR ***Hispanic*** Total = 6 (6) Intervention = NR Control = NR ***Other*** Total = 11 (12) Intervention = NR Control = NR **Level of socioeconomic deprivation** NR **Maternal Education n (%)** ***At least one parent with bachelor's degree*** Total = 89 (93)

	Intervention = NR Control = NR ***At least one parent with a graduate or professional degree*** Total = 72 (75) Intervention = NR Control = NR **Maternal age** NR
Intervention(s)/control	**Intervention:** exposure at school to one of three vegetables (cauliflower, snow peas and peppers). At the preschool, one of the introduced vegetables was served every day for 30 days in a 3 day cycle until the preschoolers had been provided with each vegetable 10 times. Vegetables were served as bite sized pieces in a snack size plastic bag for each student and weighed 24-26g as per recommendations based on the age group. All children were provided the same meal at lunch and the snack bags were handed to students in addition to their Child and Adult Care Food Program reimbursable lunches. Teachers were told not to place pressure on children to consume the vegetables. **Control:** no change to foods provided at pre-school.
Duration of follow-up	Follow-up at end of 6 week intervention
Sources of funding	Not industry funded
Sample size	N = 96 Intervention n = 43 Control n = 53

Other information	The crossover in arms after 6 weeks was not considered in this review.

G: grams; n: number of participants; NR: not reported; SD: standard deviation; USA: United States of America.

Study arms

Intervention (n = 43)

Control (n = 53)

Outcomes

Outcome	**Intervention, n = 43**	**Control, n = 53**
Vegetable consumption, grams mean (SD)	8.5 (6.8)	7.5 (7.4)

n: number of participants; SD: standard deviation.

Critical appraisal – NGA Critical appraisal – Cochrane RoB 2.0 – standard RCT (domain-based summaries)

Section	**Question**	**Answer**
Domain 1: Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	High *(The study did not provide information about randomisation or allocation methods nor reports baseline differences between groups.)*
Domain 2a: Risk of bias due to deviations from the intended	Risk of bias for deviations from the intended interventions (effect of assignment to intervention)	Low *(While participants and teachers were probably aware of the*

Section	Question	Answer
interventions (effect of assignment to intervention)		*intervention, no deviations were reported and it was unlikely as the trial crossed over at 6 weeks.)*
Domain 3. Bias due to missing outcome data	Risk-of-bias judgement for missing outcome data	Low *(Data was not available for analysis for 5% of the total sample due to lack of parent consent but was unlikely to affect the outcome.)*
Domain 4. Bias in measurement of the outcome	Risk-of-bias judgement for measurement of the outcome	Low *(Although outcome assessors were aware of the intervention, it is unlikely that knowledge of the intervention affected outcome assessment based on the data collection method (weighing the leftover packets of food).)*
Domain 5. Bias in selection of the reported result	Risk-of-bias judgement for selection of the reported result	Low *(The study was conducted according to a university review board approved protocol. No further details are listed.)*
Overall bias and Directness	Risk of bias judgement	High *(No information on randomisation or allocation sequence)*
Overall bias and Directness	Overall Directness	Directly applicable
Overall bias and Directness	Risk of bias variation across outcomes	N/A

NA: not applicable; NGA: National Guideline Alliance; RCT: randomised controlled trial; RoB: risk of bias.

Roset-Salla, 2016

Bibliographic Reference	Roset-Salla, M.; Ramon-Cabot, J.; Salabarnada-Torras, J.; Pera, G.; Dalmau, A.; Educational intervention to improve adherence to the Mediterranean diet among parents and their children aged 1-2 years. EniM clinical trial; Public health nutrition; 2016; vol. 19 (no. 6); 1131-1144

Study details

Country/ies where study was carried out	Spain
Study type	Cluster randomised controlled trial
Study dates	2010-2011
Inclusion criteria	Children aged 1-2 years (and their caregivers) who were registered in the recruited child care centres within the school year 2010-2011
Exclusion criteria	• Children still exclusively breast-feeding during the study period • Children with parents/caregivers that were not responsible for providing their dietary intake • Children requiring specific diets due to chronic diseases such as coeliac disease, food intolerances or allergies, inflammatory bowel disease • Parents/caregivers with language difficulties • Parents/caregivers that could not attend the educational workshops • No signature of informed consent.
Patient characteristics	**Child age (mean ± SD), years**

	Total = 1.3 (0.3) Intervention = 1.3 (0.3) Control = 1.4 (0.3) **Race/Ethnicity n (%)** NR **Level of socioeconomic deprivation** NR **Maternal Education (n%)** ***Primary*** Total = 14 (10) Intervention = 4 (6) Control = 10 (14) ***Secondary*** Total = 48 (35) Intervention = 21 (31) Control = 27 (38) ***University*** Total = 77 (55) Intervention = 65 (97) Control = 69 (96)

	Maternal age (mean ± SD), years Total = 35.0 (3.7) Intervention = 35.0 (3.4) Control = 35.0 (4.0)
Intervention(s)/control	**Intervention:** parents of children at the child centres were invited to four educational workshops on alimentation at the start of the study and one extra session at 4 months. Workshops had a maximum of 15 parents, were theoretical-practical and ran for 90 minutes with trained nutritional nurses holding the workshops. Each workshop had a specific focus and in order of workshops these were: food groups, Mediterranean diet, physical activity and food labels, gradual food group introduction and reminder of the workshops/question or doubts. Workshops aimed to increase practical skills, educate on nutrition and change habits via participatory-active education. This included cognitive (teaching how to improve diet), emotional (addressing beliefs and attitudes via discussion and analysis) and nutritional skill components. **Control:** parents were not provided with nutritional education and instead were invited to an optional workshop unrelated to nutrition education on food manipulation and conservation.
Duration of follow-up	Not reported
Sources of funding	Not industry funded
Sample size	Total N=192 children, 181 parents Total cluster N= 12 day-care centres (9 public and 3 private) Intervention n=111 Cluster n not reported (111 children, 103 parents) Control n=81

	Cluster n not reported (81 children, 78 parents) Adjustment for clustering using ICC=0.014 as reported in Hodder 2020 Design effect = 1.15
Other information	EniM study (nutritional intervention study among children from Mataró)

ICC: intracluster correlation coefficient; n: number of participants; NR: not reported; SD: standard deviation.

Study arms

Intervention (n = 111)

Cluster n not reported (111 children, 103 parents)

Control (n = 81)

Cluster n not reported (81 children, 78 parents)

Outcomes

Outcome	Intervention, n = 65	Control, n = 64
Child has discontinued breastfeeding Adjustment for clustering produced values in decimals, which when rounded up gave the same numbers as when not adjusted. No of events	n = 1; % = 14	n = 3; % = 38

Outcome	Intervention, n = 65	Control, n = 64
Child food consumption of vegetables and garden produce, servings/d Groups of foods and servings according to the Spanish Society of Community Nutrition (SENC). Mean (SD)	-0.2 (1.4)	-0.26 (1.51)
Child food consumption of fruit, servings/d Groups of foods and servings according to the Spanish Society of Community Nutrition (SENC). Mean (SD)	0.07 (0.88)	-0.19 (1.23)
Child consumption of sweets, snacks, soft drinks, servings/d Groups of foods and servings according to the Spanish Society of Community Nutrition (SENC). Mean (SD)	0.38 (0.85)	0.29 (1.25)
Daily intake of saturated fats (g) Mean (SD)	7.65 (9.94)	7.21 (9.22)
Daily intake of sugars (g) Mean (SD)	0.51 (29.93)	3.33 (39.29)

d: day; g: grams; SD: standard deviation.

Group numbers (n) reported are adjusted for cluster effect. Original values – Intervention n= 75; Control n = 74

Critical appraisal – Cochrane Risk of Bias tool (RoB 2.0) Cluster randomised trials NGA

Section	Question	Answer
1a. Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	High *(No information was provided on randomisation method, allocation sequence or potential for subversion.)*
1b. Bias arising from the timing of identification and recruitment of individual participants in relation to timing of randomisation	Risk of bias judgement for the timing of identification and recruitment of individual participants in relation to timing of randomisation	Low *(Individual participants were likely identified before randomisation of clusters. No baseline imbalances to suggest differential identification or recruitment between arms.)*
2. Bias due to deviations from intended interventions (If your aim is to assess the effect of assignment to intervention, answer the following questions).	Risk of bias judgement for deviations from intended interventions	Low *(Participants and teachers were aware of the trial and study, however, there were unlikely deviations from the intended intervention nor indiviuals or clusters analysed in different groups to allocation.)*
3. Bias due to missing outcome data	Risk of bias judgement for missing outcome data	High *(Number of clusters for which outcome data was available was not reported. For individual participants, proportions of missing data between groups differed. 35% of parents in the intervention group were considered drop outs as they did not complete the workshops, this is compared to 8% of dropouts in the control group. Reasons for not attending the workshop were family timetables and children illnesses while for the control group, moving away were reasons for dropouts. The study notes that those who completed the study were older and had a higher level of education (31% of the parents with primary studies finished the study v. 78% of those with a university education). It was also reported for the intervention arm that there were no nutritional differences among those completing the intervention compared to those who did not.)*

Section	Question	Answer
4. Bias in measurement of the outcome	Risk of bias judgement for measurement of the outcome	Low *(Outcome assessors were masked to the allocations)*
5. Bias in selection of the reported result	Risk of bias for selection of the reported result	Low *(Food consumption outcomes were comprehensive and unlikely to have been selected on the basis of results, multiple outcome measurements or analyses.)*
Overall bias and Directness	Risk of bias judgement	High *(The study is judged to be at high risk of bias in at least one domain.)*
Overall bias and Directness	Overall Directness	Directly applicable

NGA: National Guideline Alliance; RoB: risk of bias.

Scheiwe, 2010

Bibliographic Reference	Scheiwe, A.; Hardy, R.; Watt, R.G.; Four-year follow-up of a randomized controlled trial of a social support intervention on infant feeding practices; Maternal and Child Nutrition; 2010; vol. 6 (no. 4); 328-337

Study details

Country/ies where study was carried out	UK
Study type	Randomised controlled trial (RCT)
Study dates	December 2002 to February 2004
Inclusion criteria	Women:

	• from Registrar General occupational classes II–V (non-professional) • babies born >37 weeks • babies' birth weight above 2500 g • singletons • women able to understand written and spoken English • resident in the study area.
Exclusion criteria	Women: • were under 17 years old • infants were diagnosed with a serious medical condition or were on special diets • infants were aged over 12 weeks • women or their partners were from social class I (professional).
Patient characteristics	**Ethnicity: white, n (%)** Intervention n = 79 (50) Control n = 77 (50) **Infant's age, mean (SD), weeks** Intervention n = 10 (2) Control n = 10.2 (2.3) **Household receives income support/jobseekers allowance, n (%)** Intervention n = 52 (33)

	Control n = 51 (33) **Mother left full time education ,16 years, n (%)** Intervention n = 39 (25) Control n = 33 (21) **Social housing, n (%)** Intervention n = 95 (60) Control n = 83 (54)
Intervention(s)/control	**Intervention:** consisted of monthly home visits from trained volunteers over 9 months period (started when the baby was about 3 months old until their first birthday). Volunteers were encouraged to provide very practical and non-judgemental support and to offer a listening ear to the mother's concerns and worries about infant feeding, in particular complementary feeding. The support offered by the volunteers was designed to complement the advice and support offered by health professionals. The volunteers were local mothers trained for 4 weeks to provide support and then matched to women in the intervention group. Data were collected mainly via structured face-to-face interviews during a one-off home visit. Where home visit was not possible, participants were interviewed over the telephone, in which case, anthropometric measurements and dental status could not be taken. After the home visit or telephone interview, intervention group mothers were 171roc an l short questionnaire to get their views of the intervention. **Control:** received standard professional support from health visitors and GPs.
Duration of follow-up	4 years
Sources of funding	Not industry funded
Sample size	N = 101 Intervention n = 55

	Control n = 46
Other information	Watt 2009 and Scheiwe 2010 are publications of the same trial, but different outcomes extracted from each study.

g: grams; GP: general practitioner; n: number of participants; SD: standard deviation; UK: United Kingdom.

Study arms

Intervention (n = 55)

Control (n = 46)

Outcomes

Fruit outcomes at 4 year follow-up

Outcome	Intervention, n = 55	Control, n = 45
Fruit (Bananas) intake regularly (at least once a week) No of events	n = 41; % = 74.5	n = 40; % = 88.9
Fruit (Apples) intake regularly (at least once a week) No of events	n = 53; % = 96.4	n = 41; % = 91.1
Fruit (Pears) intake regularly (at least once a week) No of events	n = 36; % = 65.5	n = 27; % = 60
Fruit (Citrus fruits) intake regularly (at least once a week) No of events	n = 40; % = 72.7	n = 36; % = 76

Outcome	Intervention, n = 55	Control, n = 45
Fruit (soft fruit) intake regularly (at least once a week) No of events	n = 41; % = 74.5	n = 37; % = 82.2
Fruit (Dried fruit) intake regularly (at least once a week) No of events	n = 26; % = 47.3	n = 27; % = 60
Fruit (Tinned fruit) intake regularly (at least once a week) No of events	n = 5; % = 9.1	n = 7; % = 15.6

n: number of participants.

Vegetables outcomes at 4 year follow-up

Outcome	Intervention, n = 55	Control, n = 46
Vegetable (Carrots) intake regularly (at least once a week) Intervention n=54 No of events	n = 49; % = 90.7	n = 41; % = 89.1
Vegetable (other root vegetables) intake regularly (at least once a week) No of events	n = 18; % = 32.7	n = 17; % = 37
Vegetable (leafy green vegetables) intake regularly (at least once a week) No of events	n = 48; % = 87.3	n = 40; % = 87
Vegetable (peas) intake regularly (at least once a week) Control group n = 45	n = 29; % = 52.7	n = 31; % = 68.9

Outcome	Intervention, n = 55	Control, n = 46
No of events		
Vegetable (other green vegetables) intake regularly (at least once a week) No of events	n = 46 ; % = 83.6	n = 37 ; % = 80.4
Vegetable (baked beans) intake regularly (at least once a week) Control group n = 45 No of events	n = 15; % = 30.9	n = 26; % = 57.8
Vegetable (other beans and pulses) intake regularly (at least once a week) No of events	n = 18; % = 32.7	n = 16; % = 34.8
Vegetable (tomatoes) intake regularly (at least once a week) No of events	n = 46; % = 83.6	n = 37; % = 80.4
Vegetable (peppers) intake regularly (at least once a week) No of events	n = 23; % = 41.8	n = 20; % = 43.5

n: number of participants.

Drinking outcomes at 4 year follow-up

Outcome	Intervention, n = 55	Control, n = 46
Pure 174rocessing174 fruit juice (at least once a day) No of events	n = 30; % = 54.5	n = 16; % = 34.8

Outcome	Intervention, n = 55	Control, n = 46
Squash (never) No of events	n = 40; % = 72.2	n = 19; % = 41.3
Usually using a feeder beaker with sprout No of events	n = 1; % = 1.8	n = 5; % = 10.9
Still using baby bottle at age 4 years No of events	n = 7; % = 12.7	n = 9; % = 19.6
Usually going to bed with a baby bottle No of events	n = 5; % = 9.1	n = 8; % = 17.4

n: number of participants.

Dental health outcomes at 4 year follow-up

Outcome	Intervention, n = 44	Control, n = 41
Children with dmft (decayed, missing and filled deciduous teeth) No of events	n = 7; % = 15.9	n = 5; % = 12.2

n: number of participants.

Knowledge outcomes at 4 year follow-up

Outcome	Intervention, n = 55	Control, n = 46
5 or 6 correct answes out of 6 knowledge questions	n = 32; % = 58.2	n = 16; % = 34.8

Outcome	Intervention, n = 55	Control, n = 46
Sample size		
Feels 'very confident' to know what foods are recommended by health professionals Sample size	n = 21; % = 38.2	n = 17; % = 37
Feels 'very confident' to know what foods are good for child Sample size	n = 38; % = 69.1	n = 20; % = 43.5
Feels 'very confident' in being able to provide these foods Sample size	n = 42; % = 76.4	n = 31; % = 67.4

n: number of participants.

Critical appraisal – NGA Critical appraisal – Cochrane RoB 2.0 – standard RCT (domain-based summaries)

Section	Question	Answer
Domain 1: Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	Some concerns *(Randomisation was performed using random digit computer tables. No information on allocation concealment methods. No significant baseline differences were observed between groups.)*
Domain 2a: Risk of bias due to deviations from the intended interventions (effect of assignment to intervention)	Risk of bias for deviations from the intended interventions (effect of assignment to intervention)	Low *(Participants and facilitators were likely aware of the assigned intervention. It was not reported whether any deviations from intended intervention occurred due to the experimental context.)*

Section	Question	Answer
Domain 3. Bias due to missing outcome data	Risk-of-bias judgement for missing outcome data	Low
Domain 4. Bias in measurement of the outcome	Risk-of-bias judgement for measurement of the outcome	Some concerns *(Low for anthropometric outcome: outcome assessors were not aware of the trial and unlikely assessment of outcome introduce bias due to form of collection of outcome (objective outcome). Some concerns for all nutritional outcomes. Unclear if participants were aware of the intervention but considering an educational intervention, it is likely they were aware and could have introduced bias as dietary intake was self-reported by parents (subjective outcome).)*
Domain 5. Bias in selection of the reported result	Risk-of-bias judgement for selection of the reported result	Low *(Reported outcome .data not likely to have been selected from results of multiple analyses)*
Overall bias and Directness	Risk of bias judgement	Some concerns
Overall bias and Directness	Overall Directness	Directly applicable
Overall bias and Directness	Risk of bias variation across outcomes	NA

NA: not applicable; NGA: National Guideline Alliance; RCT: randomised controlled trial; RoB: risk of bias.

Smith, 2020

Bibliographic Reference	Smith, E.; Sutarso, T.; Kaye, G.L.; Access With Education Improves Fruit and Vegetable Intake in Preschool Children; Journal of nutrition education and behavior; 2020; vol. 52 (no. 2); 145-151

Study details

Country/ies where study was carried out	USA
Study type	Cluster randomised controlled trial
Study dates	Autumn 2016
Inclusion criteria	Children and their parents: • preschool, aged 3−5 years children and their parent or guardian • provided signed consent. Participants were recruited from the Head Start program in a rural county.
Exclusion criteria	Children: • have diabetes or asthma.
Patient characteristics	**Child's age, years (%)** (mean (SD): NR) **3** Treatment A n = 20 (33) Treatment B n = 36 (44) Control n = 24 (36) **4 – 5**

	Treatment A n = 41 (67) Treatment B n = 46 (56) Control n = 42 (64) **Child's race/ethnicity, n (%)** **Black** Treatment A n = 3 (5) Treatment B n = 5 (6) Control n = 4 (6) **Hispanic** Treatment A n = 2 (3) Treatment B n = 0 (0) Control n = 7 (10.6) **Mixed** Treatment A n = 11 (18) Treatment B n =13 (16) Control n = 12 (18.2) **White** Treatment A n = 45 (74) Treatment B n = 64 (78)

	Control n = 43 (65.2) **Child's weight, n (%)** **Under weight** Treatment A n = 8 (13) Treatment B n = 8 (10) Control n = 6 (9.1) **Normal** Treatment A n = 42 (69) Treatment B n = 58 (71) Control n = 47 (71.2) **Overweight** Treatment A n = 6 (9.8) Treatment B n = 6 (7) Control n = 7 (10.6) **Obese** Treatment A n = 5 (8.2) Treatment B n = 10 (12) Control n = 6 (9.1)

Intervention(s)/control	**Intervention:** Treatment A (access only) and Treatment B (access and education)- received weekly high-carotenoid fruit and vegetables (FV) at no cost. Produce was distributed directly to parents or guardians. An average of 178.9 mg of mixed carotenoids was provided weekly. Treatment B children also received weekly classroom-based FV education, and their caregivers received take-home nutrition education materials. The educational intervention included 2 components: implementation of the Harvest for Healthy Kids curricula along with companion newsletters and recipes for parents. Each 30-minute session included a story and colourful picture cards about the FVs provided and a hands-on food preparation activity (for example, making pumpkin dip); taste testing. Fruit and vegetable characters (for example, Carrie Carrot) were present during each session. Parents received newsletters that contained information on shopping for FVs, the primary nutrients provided, safe preparation and storage tips, a fitness tip, and an FV recipe with the nutritional breakdown per serving. **Control:** received neither FVs nor education.
Duration of follow-up	8 weeks
Sources of funding	Not industry funded
Sample size	N = 209 Treatment A n = 61 Treatment B n = 82 Control n = 66 Design effect (using ICC = 0.0379 as used in Hodder 2020) = 1.6064

ICC: intracluster correlation coefficient; mg: milligrams; n: number of participants; NR: not reported; SD: standard deviation; USA: United States of America.

Study arms

Treatment A (n = 61)

5 classrooms

Treatment B (n = 82)

6 classrooms

Control (n = 66)

6 classrooms

Outcomes

Mean Carotenoid Scores of fruits and vegetables intake at 8 weeks using Change Scores

Outcome	Treatment A, n = 38	Treatment B, n = 51	Control, n = 41
Fruit and vegetable consumption Mean (SE)	4887 (799)	7834 (689)	2623 (768)

n: number of participants; SE: standard error.

Group numbers (n) reported are adjusted for cluster effect. Original values – Treatment A n =61; Treatment B n = 82; Control n=66

Critical appraisal – Cochrane Risk of Bias tool (RoB 2.0) Cluster randomised trials NGA

Section	Question	Answer
1a. Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	High *(No information on method of randomisation. Participants and facilitators were not blinded to the treatments. No individual level significant differences at baseline.)*

Section	Question	Answer
1b. Bias arising from the timing of identification and recruitment of individual participants in relation to timing of randomisation	Risk of bias judgement for the timing of identification and recruitment of individual participants in relation to timing of randomisation	Low *(Individuals were identified before randomisation. No significant differences between groups at baseline.)*
2. Bias due to deviations from intended interventions (If your aim is to assess the effect of assignment to intervention, answer the following questions).	Risk of bias judgement for deviations from intended interventions	Low *(Participants and facilitators were more likely aware of the trial and study, however, there were unlikely deviations from the intended intervention nor individuals or clusters analysed in different groups to allocation.)*
3. Bias due to missing outcome data	Risk of bias judgement for missing outcome data	Low *(Data for the outcomes were available for all participants randomised.)*
4. Bias in measurement of the outcome	Risk of bias judgement for measurement of the outcome	Low *(No information whether outcome assessors were aware of the trial and unlikely assessment of outcome introduce bias due to form of collection of outcome. To measure changes in FV consumption, carotenoids were measured using a Pharmanex BioPhotonic S3 Scanner (NuSkin, Provo, UT), which employs Resonance Ramen Spectroscopy (RRS).)*
5. Bias in selection of the reported result	Risk of bias for selection of the reported result	Low *(Reported outcome data not likely to have been selected from results of multiple analyses.)*
Overall bias and Directness	Risk of bias judgement	High
Overall bias and Directness	Overall Directness	Directly applicable

FV: fruit and vegetables; NGA: National Guideline Alliance; RoB: risk of bias.

Toussaint, 2021

Bibliographic Reference	Toussaint, N.; Streppel, M.T.; Mul, S.; Balledux, M.; van Drongelen, K.; Janssen, M.; Fukkink, R.G.; Weijs, P.J.M.; The effects of a preschool-based intervention for Early Childhood Education and Care teachers in promoting healthy eating and physical activity in young children: A cluster randomised controlled trial; PloS ONE; 2021; vol. 16 (no. 7july); e0255023

Study details

Country/ies where study was carried out	Netherlands
Study type	Cluster randomised controlled trial
Study dates	September 2016 to January 2018
Inclusion criteria	Children: • aged between 2.5 to 3.5 years • have written informed consent signed by parents.
Exclusion criteria	Not reported
Patient characteristics	Child's age, mean (SD), years = 3.0 (0.2) **Child's ethnicity, n (%)*** Dutch = 42 (19) Moroccan = 78 (35) Turkish = 39 (18)

	Other western = 19 (9) Other non-western = 44 (20) *First and second generation migration backgrounds were taken into account. 27 missing values **Level of Education Respondent, n (%)**** Lower education = 42 (20) Intermediate education = 89 (43) Higher education = 78 (37) **Respondent was in 98% of the cases a parent, 40 missing values **Child's weight status, n (%)***** Underweight = 19 (9) Normal weight = 171 (76) Overweight = 28 (13) Obesity = 6 (3) ***25 missing values
Intervention(s)/control	**Intervention:** the intervention consisted of 2 programmes that were applied in succession: A Healthy Start (AHS) and PLAYgrounds for TODdlers. AHS focusses on the knowledge and practices of the teachers in order to be a healthy role model and create a healthy, active and safe environment for children. Modified version of AHS was used to train Early Childhood Education and Care (ECEC) teachers within 4 months. 3 face-to-face meetings of 2 hours each were organised for 8 groups of ECEC teachers. Each meeting was led by 1 of the coaches and a member of the research staff. The 3 meetings included theory and practical assignments from the basic national AHS module about a healthy childcare environment and in-depth national AHS modules about Nutrition, Physical Activity and Body weight. **Control:** ECEC teachers at control preschools did not receive the intervention programmes.

Duration of follow-up	5 months
Sources of funding	Not industry funded
Sample size	N = 249 children Intervention n = 137 Control n = 112 Design effect using 0.015 used in Hodder 2020 = 1.585

n: number of participants; SD: standard deviation.

Study arms

Intervention (n = 137)

21 preschools

Control (n = 112)

19 preschools

Outcomes

BMI outcomes at 9-months follow-up

Outcome	**Intervention, n = 64**	**Control, n = 59**
BMI z-score Intervention n = 21 preschools; control n = 20 preschools	0.74 (1.08)	0.71 (0.87)

Outcome	Intervention, n = 64	Control, n = 59
Mean (SD)		
BMI kg/m^2 Mean (SD)	16.47 (1.61)	16.38 (1.23)

BMI: body mass index; kg: kilograms; m: metre; n: number of participants; SD: standard deviation.

Group numbers (n) reported are adjusted for cluster effect. Original values – Intervention n =101; Control n=93

Teachers' knowledge, attitude, practices and level of confidence

Outcome	Intervention, n = 20	Control, n = 18
Knowledge (Knowledge about the Dutch dietary guidelines) Assessed by asking teachers to respond to 10 statements on the Dutch dietary guidelines and (2) to indicate from 15 food products which were 'High' or 'Low' in added sugars, salt and fibre. A sum score was calculated; each correctly answered question yielded 1 point with a maximum of 25 points Mean (SD)	19.72 (3.48)	19.39 (3.5)

n: number of participants; SD: standard deviation.

Group numbers (n) reported are adjusted for cluster effect. Original values – Intervention n =32; Control n=28

Teachers' knowledge, attitude, practices and level of confidence

Outcome	Intervention, n = 27	Control , n = 24
Attitude (response to Statement 3: I feel responsible for healthy nutrition and exercise patterns of children) Assessed using a 5-point Likert scale Mean (SD)	4.37 (0.79)	4.11 (0.73)

n: number of participants; SD: standard deviation.

Data for only one question on attitudes which most relates to this review has been extracted for analysis. Group numbers (n) reported are adjusted for cluster effect. Original values – Intervention n =43; Control n=38

Teachers' knowledge, attitude, practices and level of confidence

Outcome	Intervention, n = 25	Control , n = 24
Practices (Food-related-Modelling/Encourage-balance-and-variety) A modified version of the Child-care Food and Activity Practices Questionnaire (CFAPQ) [30] was used to assess food/activity-related practices. Responses were scored from totally disagree/never = 1 to totally agree/always = 5. A mean score per CFAPQ scale was calculated. Mean (SD)	4.47 (0.66)	4.5 (0.47)

n: number of participants; SD: standard deviation.

Data for only one question on practices, which most relates to this review has been extracted for analysis. Group numbers (n) reported are adjusted for cluster effect. Original values – Intervention n =39; Control n=38

Teachers' knowledge, attitude, practices and level of confidence

Outcome	Intervention, n = 32	Control , n = 30
Confidence (Level of confidence in supporting children in pursuing a healthy lifestyle) The teachers indicated, on a scale of 1 (not confident at all) to 10 (extremely confident), how confident they were in supporting children and their parents in a healthy lifestyle for the children Mean (SD)	7.79 (0.92)	7.65 (1.07)

n: number of participants; SD: standard deviation.

Data for only one question on confidence which most relates to this review has been extracted for analysis. Group numbers (n) reported are adjusted for cluster effect. Original values – Intervention n =50; Control n=47

Critical appraisal – Cochrane Risk of Bias tool (RoB 2.0) Cluster randomised trials NGA

Section	Question	Answer
1a. Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	Low *(Randomisation was performed by an independent researcher with the use of computer-generated lists. No information on allocation sequence concealment. No individual level significant differences at baseline.)*
1b. Bias arising from the timing of identification and recruitment of individual participants in relation to timing of randomisation	Risk of bias judgement for the timing of identification and recruitment of individual participants in relation to timing of randomisation	Low *(Although individuals were identified after randomisation, more likely selection of individual participants was not affected by knowledge of the intervention. No significant differences between groups at baseline.)*
2. Bias due to deviations from intended interventions (If your aim is to assess the effect of assignment to	Risk of bias judgement for deviations from intended interventions	Low *(Parents/participants were aware of the study, but there was no information whether they were aware of the assigned allocation. The study team was coordinated by 3 unblinded researchers and 1 blinded*

Section	Question	Answer
intervention, answer the following questions).		*researcher, however, there were unlikely deviations from the intended intervention nor individuals or clusters analysed in different groups to allocation.)*
3. Bias due to missing outcome data	Risk of bias judgement for missing outcome data	High *(Missing outcome data: 36/137 (26.3%) in intervention group, 19/112 (17%) in control group for BMI outcomes. Reasons for missing outcome data between intervention and control arms were not provided and proportions of loss to follow-up were significantly different between arms. No information whether sensitivity analyses were performed for outcomes with missing data.)*
4. Bias in measurement of the outcome	Risk of bias judgement for measurement of the outcome	Low *(No information whether outcome assessors were aware of the trial but unlikely assessment of outcome influenced by knowledge of intervention received due to form of collection of outcome in terms of BMI measurement (objective outcome). The measurements were performed (at least) twice to reduce measurement errors.)*
5. Bias in selection of the reported result	Risk of bias for selection of the reported result	Some concerns *(Food intake for 3 days at baseline and at 9 months collected but outcomes were not reported.)*
Overall bias and Directness	Risk of bias judgement	High
Overall bias and Directness	Overall Directness	Directly applicable

BMI: body mass index; NGA: National Guideline Alliance; RoB: risk of bias.

Vepsalainen, 2022

Bibliographic Reference	Vepsalainen, H.; Skaffari, E.; Wojtkowska, K.; Barlinska, J.; Kinnunen, S.; Makkonen, R.; Heikkila, M.; Lehtovirta, M.; Ray, C.; Suhonen, E.; Nevalainen, J.; Sajaniemi, N.; Erkkola, M.; A Mobile App to Increase Fruit and Vegetable Acceptance Among Finnish and Polish Preschoolers: Randomized Trial; JMIR mHealth and uHealth; 2022; vol. 10 (no. 1); e30352

Study details

Country/ies where study was carried out	Finland and Poland
Study type	Cluster randomised controlled trial
Study dates	September 2019 to November 2019
Inclusion criteria	Children: • preschoolers aged 3 to 6 years • from groups within the participating Early childhood education and care (ECEC) centres.
Exclusion criteria	Not reported
Patient characteristics	Child's age, average (SD), years = 5.0 (1.2) **Child's country, n (%)** **Finland** Total n = 95 (43.0) Intervention n = 50 (43.5) Control n = 45 (42.5)

	Poland Total n = 126 (57.0) Intervention n = 65 (56.5) Control n = 61 (57.5) **Vegetable or fruit allergy, n (%)** **No** Total n = 208 (94.1) Intervention n = 108 (93.9) Control n = 100 (94.3) **Yes** Total n = 12 (5.4) Intervention n = 7 (6.1) Control n = 5 (4.7) **Missing** Total n = 1 (0.5) Intervention n = 0 (0.0) Control n = 1 (0.9) **Parental educational level, n (%)** **Upper secondary school or lower** Total n = 55 (24.9)

	Intervention n = 32 (27.8) Control n = 23 (21.7) **Bachelor's degree or equivalent** Total n = 39 (17.6) Intervention n = 21 (18.3) Control n = 18 (17.0) **Master's degree or higher** Total n = 123 (55.7) Intervention n = 60 (52.2) Control n = 63 (59.4) **Missing** Total n = 4 (1.8) Intervention n = 2 (1.7) Control n = 2 (1.9)
Intervention(s)/control	**Intervention – Mobile app:** researchers visited the intervention arm groups and introduced the app to the ECEC professionals. The ECEC professionals received a printed guide, which contained instructions and information about the app, and a PDF version of the guide was also available through the app. The ECEC professionals were instructed to use the app with a tablet computer at least one to two times a week during the intervention period (3-4 weeks) and to record the number of tasks completed by their group in a logbook. In addition, it was recommended that each group focus on at least 6 vegetables or fruits during the intervention period.

	Control – usual care: groups were instructed to continue their normal routines during the intervention period. They were instructed to refrain from introducing any novel food education methods during the intervention period.
Duration of follow-up	Immediately post intervention
Sources of funding	Industry funded (EIT Food (The EIT Food School Network: Integrating solutions to improve eating habits and reduce food wastage)
Sample size	N = 221 Intervention n = 115 Control n = 106 Design effect (using ICC = 0.016 as used in Hodder 2020) = 1 + (average cluster size – 1) x ICC = 1 + (11 – 1) x 0.016 = 1 + 10 x 0.016 = 1.16
Other information	• Number of children between 5 – 6 years old is unclear. • The app was designed to be used in ECEC centers in groups of 3-10 children. The app was typically used in a group of 2-10 children in the Finnish ECEC centers, whereas the usual group size in the Polish ECEC centers was 24-25 children. • Participate 7 Finnish and 4 Polish ECEC centers.

EIT: European Institute of Innovation and Technology; ICC: intracluster correlation coefficient; n: number of participants; PDF: Portable Document Format; SD: standard deviation.

Study arms

Intervention: mobile app (n = 115)

12 groups from ECEC centers

Control: usual care (n = 106)

12 groups from ECEC centers

Outcomes

Fruit and vegetable outcomes at follow-up (immediately post intervention)

Outcome	Intervention: mobile app, n = 82	Control: usual care, n = 79
Fruit and vegetable acceptance score sum variable describing willingness to taste the 25 FVs listed; higher score indicates higher FV acceptance (theoretical range 0-125) Mean (SD)	78.5 (30.6)	72.4 (26.2)

FV: fruit and vegetables; n: number of participants; SD: standard deviation.

Critical appraisal – Cochrane Risk of Bias tool (RoB 2.0) Cluster randomised trials NGA

Section	Question	Answer
1a. Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	High *(No information on method of randomisation. No information whether allocation sequence was subverted. No individual level significant differences at baseline.)*
1b. Bias arising from the timing of identification and recruitment of	Risk of bias judgement for the timing of identification and recruitment of individual	Low *(Individuals were identified and background factors collected before randomisation. No significant differences between groups at baseline.)*

Section	Question	Answer
individual participants in relation to timing of randomisation	participants in relation to timing of randomisation	
2. Bias due to deviations from intended interventions (If your aim is to assess the effect of assignment to intervention, answer the following questions).	Risk of bias judgement for deviations from intended interventions	Some concerns *(The study was not blinded. Facilitators, parents of the participating children were aware of the intervention. It was not reported whether any deviations from intended intervention occurred.)*
3. Bias due to missing outcome data	Risk of bias judgement for missing outcome data	Some concerns *(Missing outcome data: 33/115 (28.7%) for intervention and 27/106 (25.7%) for control arms. No information is provided about discontinuation. Sensitivity analyses were performed for outcomes with missing data.)*
4. Bias in measurement of the outcome	Risk of bias judgement for measurement of the outcome	Some concerns *(Outcome assessors were aware of the trial and assessment of the outcome could be influenced by knowledge of intervention received as outcome data was self-reported by parents (subjective outcome). However, the app was used in the ECEC centers, whereas parents reported FV acceptance, and thus, the parents did not know exactly how much their children had used the app.)*
5. Bias in selection of the reported result	Risk of bias for selection of the reported result	Low *(Reported outcome data not likely to have been selected from results of multiple analyses.)*
Overall bias and Directness	Risk of bias judgement	High *(No information on method of randomisation or allocation sequence*

Section	Question	Answer
Overall bias and Directness	Overall Directness	Partially applicable *(Number of children between 5 – 6 years old is unclear.)*

ECEC: Early childhood education and care; NGA: National Guideline Alliance; RoB: risk of bias.

Verbestel, 2014

Bibliographic Reference	Verbestel, V.; De Coen, V.; Van Winckel, M.; Huybrechts, I.; Maes, L.; De Bourdeaudhuij, I.; Prevention of overweight in children younger than 2 years old: a pilot cluster-randomized controlled trial; Public health nutrition; 2014; vol. 17 (no. 6); 1384-1392

Study details

Country/ies where study was carried out	Belgium
Study type	Cluster randomised controlled trial
Study dates	Autumn 2008 to autumn 2009
Inclusion criteria	Children: • attending day-care centre • being 9 – 24 months old • parents provided a written consent at the start.
Exclusion criteria	Not reported

Patient characteristics	Child's age, mean (SD), months = 15.51 (2.68) Low socio-economic status (SES), % = 16.5
Intervention(s)/control	**Intervention.** Consisted of two components: • guidelines and tips presented on a poster. The poster consisted of a colourful and animated A3 sheet with five stickers. Each sticker dealt with a targeted behaviour and provided parents with practical information and/or strategies. The stickers were distributed to the parents every 2 months and were gradually stuck on the poster by the parents. The stickers were always accompanied by a letter with information about the target behaviour. • a tailored feedback form for parents about their children's activity- and dietary related behaviours. The tailored feedback was based on the activity and dietary-related measures as reported by the parents in the baseline questionnaire. The poster and the tailored feedback were provided to the parents through the day-care centres. **Control:** no intervention. Details not reported.
Duration of follow-up	immediately post-intervention
Sources of funding	Not industry funded
Sample size	N = 191 Intervention n = 126 (35 day-care centres) Control n = 65 (22 day-care centres) Design effect using ICC = 0.015 (average for fruits and vegetables as reported in Hodder 2020) = **1.84**

ICC: intracluster correlation coefficient; n: number of participants; SD: standard deviation.

Study arms

Intervention (n = 126)

35 day-care centres

Control (n = 65)

22 day-care centres

Outcomes

Beverage outcome at follow-up immediately post-intervention

Outcome	Intervention, n = 38	Control, n = 21
Soft drink consumption (ml/d) Mean (SD)	19.07 (41.64)	30.58 (46.09)

d: day; ml: milliliters; n: number of participants; SD: standard deviation.

Group numbers (n) reported are adjusted for cluster effect. Original values – Intervention n =69; Control n=38

Sweetened milk consumption at follow-up immediately post-intervention

Outcome	Intervention, n = 32	Control, n = 17
Sweetened milk consumption (ml/d) Mean (SD)	230.79 (242.72)	260.39 (237.53)

d: day; ml: milliliters; n: number of participants; SD: standard deviation.

Sweetened milk: growing-up milk, dairy drinks, milk shakes and milk products flavoured with sweet additives (soya drinks, fresh cheese and yoghurt, and milk or soya desserts).

Group numbers (n) reported are adjusted for cluster effect. Original values – Intervention n =58; Control n=32

Diet outcome at follow-up immediately post-intervention

Outcome	Intervention, n = 32	Control, n = 20
Fruit consumption (g/d) Already reported in Hodder 2020 Mean (SD)	158.72 (78.3)	153.48 (83.09)

d: day; g: grams; n: number of participants; SD: standard deviation.

Group numbers (n) reported are adjusted for cluster effect. Original values – Intervention n =58; Control n=36

Diet outcome at follow-up immediately post-intervention

Outcome	Intervention, n = 34	Control, n = 18
Vegetable consumption (g/d) Mean (SD)	86.63 (62.56)	93.49 (47.87)

d: day; g: grams; n: number of participants; SD: standard deviation.

Group numbers (n) reported are adjusted for cluster effect. Original values – Intervention n =62; Control n=33

BMI outcome at follow-up immediately post-intervention

Outcome	Intervention, n = 54	Control, n = 29
BMI z-score	0.38 (0.89)	0.3 (0.98)

Outcome	Intervention, n = 54	Control, n = 29
Mean (SD)		

BMI: body mass index; n: number of participants; SD: standard deviation.

Group numbers (n) reported are adjusted for cluster effect. Original values – Intervention n =99; Control n=54.

Critical appraisal – Cochrane Risk of Bias tool (RoB 2.0) Cluster randomised trials NGA

Section	Question	Answer
1a. Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	Some concerns *(Allocation sequence is based on socio-economic status (SES) characteristics. No information on allocation sequence concealment. No individual level significant differences at baseline.)*
1b. Bias arising from the timing of identification and recruitment of individual participants in relation to timing of randomisation	Risk of bias judgement for the timing of identification and recruitment of individual participants in relation to timing of randomisation	Low *(Although individuals were identified after randomisation, more likely selection of individual participants was not affected by knowledge of the intervention. No significant differences between groups at baseline.)*
2. Bias due to deviations from intended interventions (If your aim is to assess the effect of assignment to intervention, answer the following questions).	Risk of bias judgement for deviations from intended interventions	Low *(Facilitators were aware of the trial and study; parent more likely were aware of the assigned intervention as this information may have been incorporated in the communication/correspondence from facilitators. Therefore, there were unlikely deviations from the intended intervention nor individuals or clusters analysed in different groups to allocation.)*
3. Bias due to missing outcome data	Risk of bias judgement for missing outcome data	Some concerns *(Missing outcome data: 38/191 (19.9%) for BMI Z-score, 97/191 (50.8%) for*

Section	Question	Answer
		fruit consumption, 96/191 (50.3%) for vegetable consumption, 106/191 (55.5%) for sweets and savoury snacks, 84/191 (44%) for soft drink consumption, 101/191 (52.9%) for sweetened milk consumption, 92/191 (48%) for unsweetened milk consumption outcomes. Reasons for missing outcome data between intervention and control arms were not provided although proportions of loss to follow-up for all outcomes of interest was similar between arms. Sensitivity analyses were performed for outcomes with missing data and missingness in the outcome is not depended on it's true value.)
4. Bias in measurement of the outcome	Risk of bias judgement for measurement of the outcome	Some concerns *(Low for BMI Z-score outcome: outcome assessors were aware of the trial but unlikely assessment of outcome influenced by knowledge of intervention received due to form of collection of outcome in terms of BMI measurement.Some concerns for all diet outcomes: outcome assessors were aware of the trial and assessment of the outcome could be influenced by knowledge of intervention received as dietary intake was self-reported by parents (subjective outcome).)*
5. Bias in selection of the reported result	Risk of bias for selection of the reported result	Low *(Reported outcome data not likely to have been selected from results of multiple analyses.)*
Overall bias and Directness	Risk of bias judgement	Some concerns
Overall bias and Directness	Overall Directness	Directly applicable

BMI: body mass index; NGA: National Guideline Alliance; RoB: risk of bias.

Vereecken, 2009

Bibliographic Reference	Vereecken, C; Huybrechts, I; van Houte, H; Martens, V; Wittebroodt, I; Maes, L; Results from a dietary intervention study in preschools “Beastly Healthy at School”; International journal of public health; 2009; vol. 54 (no. 3); 142-149

Study details

Country/ies where study was carried out	Belgium
Study type	Cluster randomised controlled trial
Study dates	September 2006 to March – April 2007
Inclusion criteria	Children attending participating schools. No other details were reported.
Exclusion criteria	Not reported
Patient characteristics	**Child’s year of birth (%)** <2002 – intervention n = 41, control = 51 2002 – intervention n = 28, control = 24 ≥2003 – intervention n = 31, control = 26 **Mother’s education level* (%)** Low – intervention n = 49, control = 49 Intermediate – intervention n = 34, control = 35 High intervention – n = 16, control = 16 **Father’s education level* (%)**

	Low – intervention n = 60, control = 57 Intermediate – intervention n = 22, control = 26 High – intervention n = 18, control = 17 low = secondary school or less, medium = bachelor, high = bachelor with supplementary education or master
Intervention(s)/control	**Intervention:** 'Beastly Healthy at School' program for preschoolers developed by teacher training college. The Intervention Mapping Protocol was used to target the intervention at the class and school level and the home environment. **Child:** • guided and self-guided activities based on experiential • education (for example tasting) and developmental education (for example • explanation of concepts of food triangle) • role model, feed back and reinforcement by teachers • educational role-model story and characters • availability of healthy foods • availability of cooking equipment. **Parents:** • newsletters • suggestions for the back and forth diary • work sheets and creations by children

	• parent evenings and other school activities with parents. **Teacher:** • training sessions • mI including didactic and policy aspects • digital learning environment • newsletters • group discussions with teachers • examples of good practices. **School environment:** • newsletters • training sessions for principals and cafeteria staff • help on demand via e-mail • examples of good practices • policy aspects in the teachers' manual • feedback to schools. **Control:** no intervention. Details not reported.
Duration of follow-up	immediately post-intervention
Sources of funding	Not industry funded
Sample size	N = 476

	Intervention group = 308 (8 schools) Control group = 168 (8 schools) Hodder 2020 reports “Contact with the author indicated that the analysis was adjusted for clustering by school”, so no calculations adjusting for clusters made

n: number of participants.

Study arms

Intervention (n = 867)

8 schools

Control (n = 565)

8 schools

Outcomes

Average daily consumption reported by parents

Outcome	Intervention, n = 308	Control, n = 168
Fruit juice (ml) Marginal mean (SE) Custom value	-29 (12)	-19 (14)
Sugared soft drinks (ml) Marginal mean (SE)	-8 (5)	-6 (6)

Outcome	Intervention, n = 308	Control, n = 168
Custom value		
Sugared milk drinks (ml) Marginal mean (SE) Custom value	-22 (7)	-31 (10)
Fresh fruit (g) Marginal mean (SE) Custom value	6 (3)	-4 (4)
Vegetables (g) Marginal mean (SE) Custom value	-1 (2)	-4 (3)

g: grams; ml: milliliter; n: number of participants; SE: standard error.

Critical appraisal – Cochrane Risk of Bias tool (RoB 2.0) Cluster randomised trials NGA

Section	Question	Answer
1a. Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	High *(No information on method of randomisation or allocation sequence concealment. No individual level significant differences at baseline.)*
1b. Bias arising from the timing of identification and recruitment of	Risk of bias judgement for the timing of identification and	Some concerns *(Individuals were identified after randomisation and there is no*

Section	Question	Answer
individual participants in relation to timing of randomisation	recruitment of individual participants in relation to timing of randomisation	*information whether selection of individual participants was not affected by knowledge of the intervention. No significant differences between groups at baseline.)*
2. Bias due to deviations from intended interventions (If your aim is to assess the effect of assignment to intervention, answer the following questions).	Risk of bias judgement for deviations from intended interventions	Some concerns *(No information if trial personnel and children/parent were aware of assigned intervention. No information reported on whether any deviations occurred or individuals or clusters analysed in group different to assignment.)*
3. Bias due to missing outcome data	Risk of bias judgement for missing outcome data	High *(Lost to follow-up 308/867 (35.5%) in intervention group and 168/565 (29.6%) in control group of all children approached at baseline. Only matched baseline data with follow-up data and questionnaire completed by the same parent was reported. No information if sensitivity analyses were performed for all outcomes with missing data and unclear whether missingness in the outcome depended on it's true value.)*
4. Bias in measurement of the outcome	Risk of bias judgement for measurement of the outcome	High *(No information whether outcome assessors were aware of the intervention received by study participants. Assessment of the outcome could be influenced by knowledge of intervention received as dietary intake was self-reported by parents and school teachers (subjective outcome).)*
5. Bias in selection of the reported result	Risk of bias for selection of the reported result	Low *(Reported outcome data not likely to have been selected from results of multiple analyses.)*
Overall bias and Directness	Risk of bias judgement	High

Section	Question	Answer
		(The study is judged to be at high risk of bias in at least one domain)
Overall bias and Directness	Overall Directness	Directly applicable

NGA: National Guideline Alliance; RoB: risk of bias.

Vlasblom, 2020

Bibliographic Reference	Vlasblom, E.; van Grieken, A.; Beltman, M.; L'Hoir, M.P.; Raat, H.; Boere-Boonekamp, M.M.; Parenting support to prevent overweight during regular well-child visits in 0-3 year old children (BBOFT+ program), a cluster randomized trial on the effectiveness on child BMI and health behaviors and parenting; PloS ONE; 2020; vol. 15 (no. 8august); e0237564

Study details

Country/ies where study was carried out	Netherlands
Study type	Cluster randomised controlled trial
Study dates	January 2009 to September 2013
Inclusion criteria	Parents and their children: • child born between January 2009 and September 2010 • parents provided written informed consent.
Exclusion criteria	• Parents unable to read the Dutch language
Patient characteristics	**Child's birth weight in kilograms, mean (SD)**; missing n = 11 Intervention = 3463.9 (558.5)

	Control = 3453.6 (528.4) **Child's ethnic background (based on the grandparents' country of birth), n (%)**; missing n = 4 **Dutch** Intervention = 774 (86.1) Control = 862 (78.9) **Non-Dutch** Intervention = 125 (13.9) Control = 230 (21.1) **Mother's education level, n (%)**; missing n = 39 **Low** Intervention = 135 (15.3) Control = 148 (13.8) **Mid** Intervention = 339 (38.5) Control = 359 (33.4) **High** Intervention = 407 (46.2) Control = 568 (52.8) **Father's education level, n (%)**; missing n = 111 **Low**

	Intervention = 135 (16.0) Control = 211 (20.3) **Mid** Intervention = 356 (42.1) Control = 344 (33.1) **High** Intervention = 354 (41.9) Control = 484 (46.6)
Intervention(s)/control	**Intervention (BBOFT+):** included targeted education and guidance of parents in applying the principles of stimulus control, 211rocessin and classic conditioning, thereby increasing positive parenting skills. The intervention received during all well-child visits, such as 8 to 13 visits of 10–20 minutes in the first three years. To support 211rocessing211, the Youth Health Care (YHC) professionals used a small, calendar-like booklet. The front side of the booklet consisted of pictures of parents and children illustrating the desired behavior, the backside provided all age-appropriate items (8–15 per visit) to be discussed with parents by YHC professionals during the visits. The booklet was specifically designed to be suited for all parents, including those with low literacy skills. The intervention comprised of several steps: 1. building a positive work relation with the parent; 2. risk assessment; 3. introducing the booklet; 4. asking the parents which items of the booklet they would like to focus on; 5. providing information about the chosen items, after asking for permission to do so. All YHC professionals received the BBOFT+ manual and followed two training sessions.

	Control: regular well-child visits with standard information to stimulate healthy child development. This might include information on feeding, physical activity, sleep routine, that is and so on. From the age of 2 years, if necessary, obese children were referred to the pediatrician, in accordance with the Dutch YHC Overweight prevention protocol. The professionals in the control group did not receive any specific training regarding overweight prevention, nor specific supporting materials.
Duration of follow-up	Child age 14 and 36 months
Sources of funding	Not industry funded
Sample size	N = 1995 Intervention n = 901 Control n = 1094 Design effect using ICC = 0.015 as used in Hodder 2020 = 1.495

BBOFT+: breastfeeding, daily breakfast, daily going outdoors, limiting sweet beverages and minimal TV or computer time, and healthy sleep behaviour and improvement of parenting skills; ICC: intracluster correlation coefficient; n: number of participants; SD: standard deviation.

Study arms

BBOFT+ (n = 901)

17 YHC teams

Control (n = 1094)

17 YHC teams

Outcomes

Health behaviour outcomes at child age 14 months

Outcome	BBOFT+, n = 455	Control, n = 549
Drinking ≥3 SB per day (versus. <3 drinks) on weekdays SB – sweet beverages No of events	n = 273; % = 40.8	n = 347; % = 43.1
Drinking ≥3 SB per day (versus <3 drinks) on weekend days SB – sweet beverages No of events	n = 291; % = 43.8	n = 354; % = 44.1

BBOFT+: breastfeeding, daily breakfast, daily going outdoors, limiting sweet beverages and minimal TV or computer time, and healthy sleep behavior and improvement of parenting skills.

Group numbers (n) reported are adjusted for cluster effect. Original values – Intervention n =680; Control n=821

Health behaviour outcomes at child age 36 months

Outcome	BBOFT+, n = 443	Control, n = 512
Drinking ≥3 SB per day (versus <3 drinks) on weekdays SB – sweet beverages No of events	n = 240; % = 37	n = 278; % = 36.7
Drinking ≥3 SB per day (versus <3 drinks) on weekend days SB – sweet beverages No of events	n = 269; % = 41.1	n = 300; % = 39.7

BBOFT+: breastfeeding, daily breakfast, daily going outdoors, limiting sweet beverages and minimal TV or computer time, and healthy sleep behavior and improvement of parenting skills.

Group numbers (n) reported are adjusted for cluster effect. Original values – Intervention n =663; Control n=766

BMI outcomes at child age 14 months

Outcome	BBOFT+, n = 603	Control, n = 732
BMI SDS BMI SDS – The Body Mass Index Standard Deviation Score Mean (SD)	-0.22 (0.97)	-0.26 (0.95)

BBOFT+: breastfeeding, daily breakfast, daily going outdoors, limiting sweet beverages and minimal TV or computer time, and healthy sleep behaviour and improvement of parenting skills; BMI: body mass index; n: number of participants; SD: standard deviation.

Group numbers (n) reported are adjusted for cluster effect. Original values – Intervention n =901; Control n=1094

BMI outcomes at child age 36 months

Outcome	BBOFT+, n = 603	Control, n = 732
BMI SDS BMI SDS – The Body Mass Index Standard Deviation Score Mean (SD)	-0.06 (1.08)	-0.15 (1.03)

BBOFT+: breastfeeding, daily breakfast, daily going outdoors, limiting sweet beverages and minimal TV or computer time, and healthy sleep behaviour and improvement of parenting skills; BMI: body mass index; n: number of participants; SD: standard deviation.

BMI SDS – The Body Mass Index Standard Deviation Score

Group numbers (n) reported are adjusted for cluster effect. Original values – Intervention n =901; Control n=1094

Critical appraisal – Cochrane Risk of Bias tool (RoB 2.0) Cluster randomised trials NGA

Section	Question	Answer
1a. Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	Some concerns *(Cluster randomization was performed by randomly assigning Youth Health Care (YHC) teams within an organization using a computerized random allocation generator. The YHC team, consisting of community physicians and nurses, was the unit of randomization. BBOFT+ population was slightly lower educated and more often had a Dutch ethnic background than the control population. It is unknown if this difference is coincidental, or if it is caused by non-blind participation of parents in intervention or control group.)*
1b. Bias arising from the timing of identification and recruitment of individual participants in relation to timing of randomisation	Risk of bias judgement for the timing of identification and recruitment of individual participants in relation to timing of randomisation	Some concerns *(Individuals were identified after randomisation. There was no information whether selection of individual participants was affected by knowledge of the intervention selection and whether difference in baseline is coincidental, or if it is caused by non-blind participation of parents in intervention or control group.)*
2. Bias due to deviations from intended interventions (If your aim is to assess the effect of assignment to intervention, answer the following questions).	Risk of bias judgement for deviations from intended interventions	Some concerns *(Parents, YHC professionals and research assistants were not blinded to the experimental conditions. It was not reported whether any deviations from intended intervention occurred due to the experimental context. It is unlikely that individuals or clusters analysed in different groups to allocation.)*
3. Bias due to missing outcome data	Risk of bias judgement for missing outcome data	High *(Low for BMI outcomes: The child's BMI was calculated based on the height and weight data collected from the YHC files. These anthropometric data were measured during each YHC visit by a YHC professional, using standardised protocols, assuming data was available for all participants. High for health behaviour outcomes: lost to follow-up in intervention group 221/901 (24.5%), in control group 273/1094 (25%)*

Section	Question	Answer
		for health behaviour outcomes at child age 14 months, and in intervention group 238/901 (26.4%), in control group 328/1094 (30%) for health behaviour outcomes at child age 36 months. No information if sensitivity analyses were performed for all outcomes with missing data.)
4. Bias in measurement of the outcome	Risk of bias judgement for measurement of the outcome	Some concerns *(Low for BMI outcome: outcome assessors were aware of the trial but unlikely assessment of outcome influenced by knowledge of intervention received due to form of collection of outcome in terms of BMI measurement. Some concerns for all health behaviour outcomes: outcome assessors were aware of the trial and assessment of the outcome could be influenced by knowledge of intervention received as health behaviour was self-reported by parents (subjective outcome).)*
5. Bias in selection of the reported result	Risk of bias for selection of the reported result	Low *(Reported outcome data not likely to have been selected from results of multiple analyses.)*
Overall bias and Directness	Risk of bias judgement	Some concerns *(Some concerns for BMI outcomes. High for all health behaviour outcomes.)*
Overall bias and Directness	Overall Directness	Directly applicable

BBOFT+: breastfeeding, daily breakfast, daily going outdoors, limiting sweet beverages and minimal TV or computer time, and healthy sleep behavior and improvement of parenting skills; NGA: National Guideline Alliance; RoB: risk of bias.

Watt, 2009

Bibliographic Reference	Watt, R.G.; Tull, K.I.; Hardy, R.; Wiggins, M.; Kelly, Y.; Molloy, B.; Dowler, E.; Apps, J.; McGlone, P.; Effectiveness of a social support intervention on infant feeding practices: Randomised controlled trial; Journal of Epidemiology and Community Health; 2009; vol. 63 (no. 2); 156-162

Study details

Country/ies where study was carried out	UK
Study type	Randomised controlled trial (RCT)
Study dates	December 2002 to February 2004
Inclusion criteria	Women: • from Registrar General occupational classes II–V (non-professional) • babies born >37 weeks • babies' birth weight above 2500 g • singletons • women able to understand written and spoken English • resident in the study area.
Exclusion criteria	Women: • were under 17 years old • infants were diagnosed with a serious medical condition or were on special diets • infants were aged over 12 weeks

	• women or their partners were from social class I (professional).
Patient characteristics	**Ethnicity: white, n (%)** Intervention = 79 (50) Control = 77 (50) **Infant's age, mean (SD), weeks** Intervention = 10 (2) Control = 10.2 (2.3) **Household receives income support/jobseekers allowance, n (%)** Intervention = 52 (33) Control = 51 (33) **Mother left full time education ,16 years, n (%)** Intervention = 39 (25) Control = 33 (21) **Social housing, n (%)** Intervention = 95 (60) Control = 83 (54)
Intervention(s)/control	**Intervention:** consisted of monthly home visits from trained volunteers over 9 months period (started when the baby was about 3 months old until their first birthday). Volunteers were encouraged to provide very practical and non-judgemental support and to offer a listening ear to the mother's concerns and worries about infant feeding, in particular complementary feeding. The support offered by the volunteers was designed to complement the advice and support

	offered by health professionals. The volunteers were local mothers trained for 4 weeks to provide support and then matched to women in the intervention group. **Control:** received standard professional support from health visitors and GPs.
Duration of follow-up	2 months (child age 12 months) and 8 months (child age 18 months) Baseline when infants were aged approximately 10 weeks
Sources of funding	Not industry funded
Sample size	N = 312 Intervention n = 157 Control n = 155
Other information	Watt 2009 and Scheiwe 2010 are publications of the same trial, but different outcomes extracted from each study.

g: grams; GP: general practitioner; n: number of participants; SD: standard deviation; UK: United Kingdom.

Study arms

Intervention (n = 157)

Control (n = 155)

Outcomes

Nutritional outcomes at 6 months follow-up (child 18 months old)

Outcome	Intervention, n = 104	Control, n = 108
Vitamin C from all fruit (mg) Mean (SD)	19.9 (19.3)	21.4 (18)
Fat (g) Mean (SD)	47.2 (13.6)	48.1 (13.8)
Total sugars (g) Mean (SD)	85 (40.5)	89.8 (51.9)
Iron (mg) Mean (SD)	6.8 (2.8)	7.9 (5.4)

g: grams; mg: milligrams; n: number of participants; SD: standard deviation.

Anthropometric outcome at 6 months follow-up (child 18 months old)

Outcome	Intervention, n = 103	Control, n = 108
Length (cm) Mean (SD)	84.2 (3.3)	84 (3.5)

cm: centimetre; n: number of participants; SD: standard deviation.

Feeding practices and mother's outcomes at 6 month's follow-up (child aged 18 months)

Outcome	Intervention, n = 104	Control, n = 108
No sugar sweetened beverages (squash for example 221roces or other cordial drinks) No of events	n = 25; % = 24	n = 33; % = 31
No longer using a bottle No of events	n = 43; % = 41	n = 26; % = 24
Knowledge that bottle feeding should be discouraged from 12 months of age No of events	n = 74; % = 71	n = 62; % = 57
Mothers confident on health professionals recommendations on child feeding No of events	n = 99; % = 95	n = 95; % = 88

n: number of participants.

Critical appraisal – NGA Critical appraisal – Cochrane RoB 2.0 – standard RCT (domain-based summaries)

Section	Question	Answer
Domain 1: Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	Some concerns *(Randomisation was performed using random digit computer tables. No information on allocation concealment methods. No significant baseline differences were observed between groups.)*
Domain 2a: Risk of bias due to deviations from the intended interventions (effect of assignment to intervention)	Risk of bias for deviations from the intended interventions (effect of assignment to intervention)	Low *(Participants and facilitators were likely aware of the assigned intervention. It was not reported whether any deviations from intended intervention occurred due to the experimental context.)*

Section	Question	Answer
Domain 3. Bias due to missing outcome data	Risk-of-bias judgement for missing outcome data	High *(Missing outcome data: 82/312 (26.3%) for anthropometric outcome and 74/312 (23.7%) for all diet outcomes at 2 months follow-up; 101/312 (32.4%) for anthropometric outcome and 100/312 (32%) for all diet outcomes at 8 months follow-up. No information whether study performed a sensitivity analysis or use any analysis methods to correct for bias. The study did not not report reasons for missing outcomes preventing judgement as to whether loss to follow-up or withdrawal was related to outcome.)*
Domain 4. Bias in measurement of the outcome	Risk-of-bias judgement for measurement of the outcome	Some concerns *(Low for anthropometric outcome: outcome assessors were not aware of the trial and unlikely assessment of outcome introduce bias due to form of collection of outcome (objective outcome)..Some concerns for all nutritional outcomes: outcome assessors were not aware of the trial. Although data collection method, 24-hour multiple pass recall, was detailed and systematic but could introduce bias as dietary intake was self-reported by parents (subjective outcome).)*
Domain 5. Bias in selection of the reported result	Risk-of-bias judgement for selection of the reported result	Low *(Reported outcome data not likely to have been selected from results of multiple analyses.)*
Overall bias and Directness	Risk of bias judgement	High
Overall bias and Directness	Overall Directness	Directly applicable
Overall bias and Directness	Risk of bias variation across outcomes	NA

NA: not applicable; NGA: National Guideline Alliance; RCT: randomised controlled trial; RoB: risk of bias.

Wen, 2022

Bibliographic Reference	Wen, L.M.; Xu, H.; Taki, S.; Buchanan, L.; Rissel, C.; Phongsavan, P.; Hayes, A.J.; Bedford, K.; Moreton, R.; Baur, L.A.; Effects of telephone support or short message service on body mass index, eating and screen time behaviours of children age 2 years: A 3-arm randomized controlled trial; Pediatric Obesity; 2022; vol. 17 (no. 5); e12875

Study details

Country/ies where study was carried out	Australia
Study type	Randomised controlled trial (RCT)
Study dates	February 2017 – October 2019
Inclusion criteria	Women: • are ≥16 years old • are 24–34 weeks pregnant • able to communicate in English with a mobile phone • attending the antenatal clinics of eight hospitals across New South Wales (NSW) Australia • live in the recruitment areas.
Exclusion criteria	Women: • had a severe medical condition or known major fetal anomalies based on medical advice.
Patient characteristics	**Mother's age, n (%), years** (mean (SD): NR) 16 -24 = 97 (8)

	25 – 29 = 272 (24) 30 – 34 = 442 (38) 35 – 39 = 270 (23) 40 – 49 = 74 (7) **Mother's country of birth** Australia = 425 (37) Other = 730 (63) **Annual household income, n (%)** <40 000$ = 136 (12) 40 000$ - 79 999$ = 252 (22) ≥80 000$ = 639 (55) Did not know or refused to answer = 128 (11) **Mother's employment status** Employed (employed or paid or unpaid maternity leave) = 711 (62) Other = 443 (38) Unknown = 1 (0.1) **Mother's educational level** Up to HSC to TAFE or diploma = 392 (34) University = 761 (66) Unknown = 2 (0.2)

Intervention(s)/control	The details of the initial six staged interventions from the third trimester to 12 months of the child's age were reported elsewhere. Between 12 and 24 months of age, staged interventions were implemented at three time points: 12–15 months, 15–18 months and 18–24 months. **Telephone support:** 9 sessions to mothers were made by Child and Family Health Nurses. Each support session was conducted for about 30–60 min after mailing each of the intervention booklets at specific time points. 9 telephone support scripts were developed to guide the intervention sessions. **SMS**: 9 staged SMS interventions were implemented following mailing of the intervention booklets at the specific time points. A 2-way automated SMS system was used to send the SMSs twice a week for 4 weeks at a predetermined time (10 a.m.–1 p.m.) for the period of 12 and 24 months. **Control:** mothers received usual care comprising at least one nurse visit for general support at home and possible multiple home visits for vulnerable families from the local health districts.
Duration of follow-up	Immediately post-intervention
Sources of funding	Not industry funded
Sample size	N = 1155 Telephone support n = 386 SMS n = 384 Control n = 385

HSC: Higher Secondary School Certificate; n: number of participants; NR: not reported; SD: standard deviation; sms: short message service; TAFE: Technical and Further Education.

Study arms

Telephone support (n = 386)

SMS (n = 384)

Control (n = 385)

Outcomes

Diet outcomes at 24 months follow-up*

Outcome	Telephone support, n = 246	SMS, n = 284	Control, n = 267
Drinking from cup Sample size	n = 330; % = 85	n = 326; % = 85	n = 297; % = 77
No bottle at bedtime Sample size	n = 238; % = 62	n = 210; % = 55	n = 146; % = 38
Vegetable ≥ 2 serves/day Sample size	n = 222; % = 57	n = 229; % = 60	n = 211; % = 55
Fruit ≥ 2 serves/day Sample size	n = 282; % = 73	n = 300; % = 78	n = 273; % = 71
No fast food Sample size	n = 179; % = 46	n = 157; % = 41	n = 146; % = 38
No soft drink Sample size	n = 340; % = 88	n = 345; % = 90	n = 338; % = 88

n: number of participants; sms: short message service.

*Multiple imputation analysis

BMI outcomes at 24 months follow-up*

Outcome	Telephone support, n = 200	SMS, n = 242	Control, n = 220
BMI Mean (95% CI)	16.89 (16.69 to 17.09)	16.9 (16.7 to 17.11)	16.94 (16.74 to 17.14)
BMI-for-age z-score Mean (95% CI)	0.83 (0.7 to 0.97)	0.84 (0.7 to 0.98)	0.86 (0.72 to 0.99)

BMI: body mass index; CI: confidence interval; n: number of participants; sms: short message service.

*Complete cases analysis

BMI outcomes at 24 months follow-up*

Outcome	Telephone support, n = 386	SMS, n = 384	Control, n = 385
BMI Mean (95% CI)	16.93 (16.73 to 17.13)	16.92 (16.73 to 17.11)	16.95 (16.73 to 17.16)
BMI-for-age z-score Mean (95% CI)	0.86 (0.72 to 0.99)	0.85 (0.71 to 0.98)	0.87 (0.72 to 1.02)

BMI: body mass index; CI: confidence interval; n: number of participants; sms: short message service.

*Multiple imputation analysis

Critical appraisal – NGA Critical appraisal – Cochrane RoB 2.0 – standard RCT (domain-based summaries)

Section	Question	Answer
Domain 1: Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	Some concerns *(Randomisation was performed using randomly permuted blocks. No information on allocation concealment methods. No significant baseline differences were observed between groups.)*
Domain 2a: Risk of bias due to deviations from the intended interventions (effect of assignment to intervention)	Risk of bias for deviations from the intended interventions (effect of assignment to intervention)	Low *(Participants were aware of the assigned intervention. Market survey company was contracted for dietary outcomes collection. Research assistants who measured child's weight and height were blinded to group allocation. It was not reported whether any deviations from intended intervention occurred due to the experimental context.)*
Domain 3. Bias due to missing outcome data	Risk-of-bias judgement for missing outcome data	Some concerns *(Lost to follow-up 493/1155 (42.7%) participants for BMI outcome and 358/1155 (31%) participants for diet outcomes analysis. Sensitivity analyses were performed for outcomes with missing data, but results were not reported. More likely missingness in the outcome is not depended on it's true value.)*
Domain 4. Bias in measurement of the outcome	Risk-of-bias judgement for measurement of the outcome	Low *(Dietary outcomes were assessed using validated questionnaires by blinded interviewers through telephone interviews. Child's weight and height was measured by blinded to group allocation research assistants.)*
Domain 5. Bias in selection of the reported result	Risk-of-bias judgement for selection of the reported result	Low *(Reported outcome data not likely to have been selected from results of multiple analyses.)*
Overall bias and Directness	Risk of bias judgement	Some concerns
Overall bias and Directness	Overall Directness	Directly applicable

Section	Question	Answer
Overall bias and Directness	Risk of bias variation across outcomes	NA

NA: not applicable; NGA: National Guideline Alliance; RCT: randomised controlled trial; RoB: risk of bias.

Wolfenden, 2014

Bibliographic Reference	Wolfenden, L; Wyse, R; Campbell, E; Brennan, L; Campbell, KJ; Fletcher, A; Wiggers, J; Bowman, J; Heard, TR; Randomized controlled trial of a telephone-based intervention for child fruit and vegetable intake: long-term follow-up; American journal of clinical nutrition; 2014; vol. 99 (no. 3); 543-550

Study details

Country/ies where study was carried out	Australia
Study type	Cluster randomised controlled trial
Study dates	April to October 2010
Inclusion criteria	Preschools in the study region were randomly selected and approached to participate in the study Parents who: • had children aged 3–5 y who attended a participating preschool, • resided with their child for at least 4 d/wk, • spoke English,

	• their child did not have special dietary requirements for which the intervention strategies would be inappropriate (as determined by an accredited practicing dietitian).
Exclusion criteria	Preschools that: • provided meals to children, • catered for children with special needs, • were government preschools, • had participated in child healthy eating research projects in the past 6 months.
Patient characteristics	Child's age, mean (SD) Intervention = 4.3 (0.6) years Control = 4.3 (0.6) years Parent's age, mean (SD) Intervention = 35.2 (5.6) years Control = 35.7 (5.0) years Household income ≥$100,000, % Intervention = 42.4% Control = 40.2%
Intervention(s)/control	**Intervention:** The intervention consisted of four 30-min telephone contacts delivered weekly over 1 month as well as resources including a guidebook that contained information about healthy eating for children. The telephone calls were

	delivered by trained telephone interviewers with no formal health or medical qualifications. To ensure standardization and intervention fidelity, the content of the calls was scripted by using computer-assisted telephone-interviewing software, and interviewers attended biweekly group supervision. The intervention was based on Golan and Weizman's (32) model for the prevention of obesity among children, which draws on socioecologic theory and seeks to introduce familial norms related to healthy eating in the home. Specifically, the intervention sought to increase the availability of fruit and vegetables in the home (for example, ensuring fruit and vegetables are visible and preparing and presenting fruit and vegetables in a way that appeals to children), encourage supportive family eating routines (for example, eating meals as a family and without the television on), and promote parental role 231rocessin of fruit and vegetable consumption.
Duration of follow-up	17 months post-intervention
Sources of funding	Not industry funded
Sample size	N = 394

SD: standard deviation.

Study arms

Focused nutrition education (n = 208)

Preschools n =15

Control: basic nutrition information (n = 186)

Preschools, n =15

Outcomes

Nutritional outcomes at 17 months follow-up (18 months from baseline)

Outcome	Focused nutrition education, n = 208	Control: basic nutrition information, n = 186
CDQ – Fruit and vegetable intake score (range 0-28) Baseline data were carried forward for any missing data at follow-up to assess the robustness of the missing data at random assumption of the main analysis. Mean (SE)	16.35 (0.32)	15.81 (0.32)
Number of child servings (per day) of fruit Mean (SE)	2.91 (0.1)	2.42 (0.08)
Number of child servings (per day) of vegetables Mean (SE)	2.98 (0.11)	2.55 (0.1)

n: number of participants; SE: standard error.

Critical appraisal – Cochrane Risk of Bias tool (RoB 2.0) Cluster randomised trials NGA

Section	Question	Answer
1a. Bias arising from the randomisation process	Risk of bias judgement for the randomisation process	Low
1b. Bias arising from the timing of identification and recruitment of individual participants in relation to timing of randomisation	Risk of bias judgement for the timing of identification and recruitment of individual participants in relation to timing of randomisation	Low

Section	Question	Answer
2. Bias due to deviations from intended interventions (If your aim is to assess the effect of assignment to intervention, answer the following questions).	Risk of bias judgement for deviations from intended interventions	Some concerns *(Participants were not blinded to the intervention they received)*
3. Bias due to missing outcome data	Risk of bias judgement for missing outcome data	Low *(Missing data for 17% participants. However, sensitivity analysis was carried out (baseline data substituted for missing data at follow-up and analysis of post-interventions differences between groups at follow up were carried out))*
4. Bias in measurement of the outcome	Risk of bias judgement for measurement of the outcome	Some concerns *(Outcomes were self-reported and participants were aware of the intervention group they were assigned to)*
5. Bias in selection of the reported result	Risk of bias for selection of the reported result	Low
Overall bias and Directness	Risk of bias judgement	Some concerns *(Some concerns around blinding (participants were aware of the intervention group assigned to) and measurement of outcome (self-reported outcomes))*
Overall bias and Directness	Overall Directness	Directly applicable

NGA: National Guideline Alliance; RoB: risk of bias.

Appendix E Forest plots

Forest plots for review question: What interventions are effective to promote healthy eating and drinking practices, including complementary feeding, for children from 12 months to 5 years (in line with government advice)?

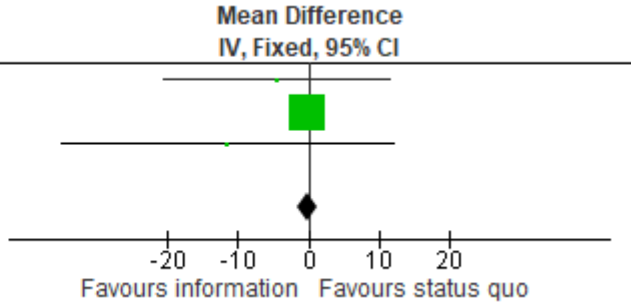
This section includes forest plots only for outcomes that are meta-analysed. Outcomes from single studies are not presented here; the quality assessment for such outcomes is provided in the GRADE profiles in appendix F.

Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Figure 2: Sugar sweetened beverage (ml/d) (intervention period 1-2 years) (follow-up immediately post-intervention to 42 months)

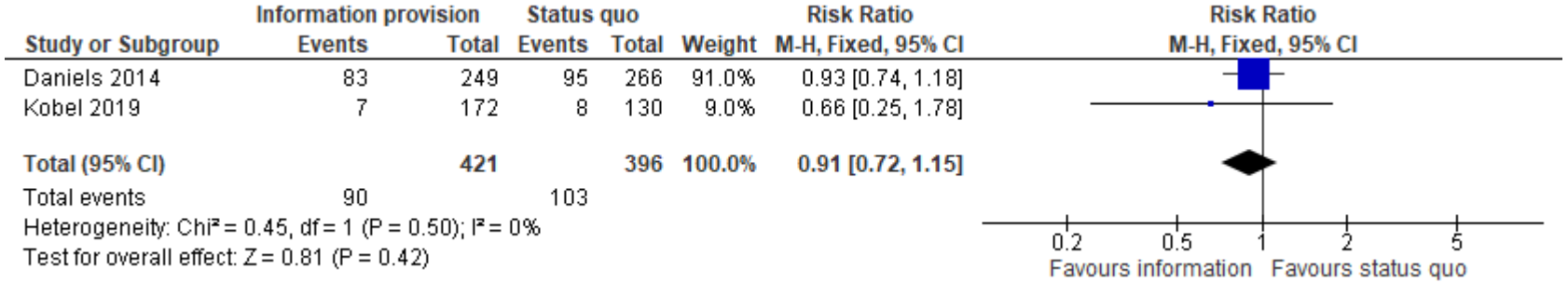
	Information provision			Status quo				Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Fixed, 95% CI
De Coen 2012	53.7	90.8	268	58.2	86.1	201	0.7%	-4.50 [-20.62, 11.62]
Magarey 2016	2	7.2973	213	2.1	7.2629	211	98.9%	-0.10 [-1.49, 1.29]
Verbestel 2014	19.07	41.64	38	30.58	46.09	21	0.3%	-11.51 [-35.26, 12.24]
Total (95% CI)			**519**			**433**	**100.0%**	**-0.17 [-1.55, 1.21]**

Heterogeneity: Chi² = 1.16, df = 2 (P = 0.56); I² = 0%
Test for overall effect: Z = 0.24 (P = 0.81)



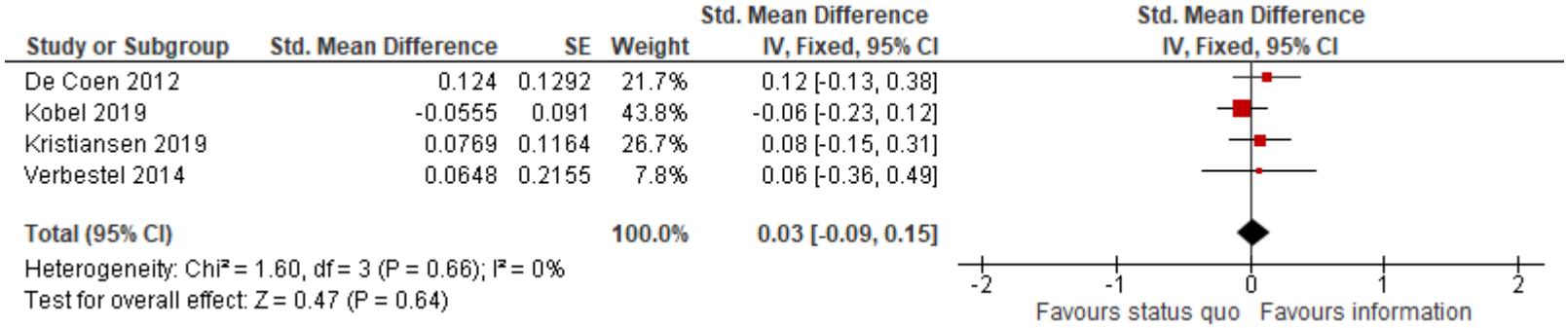
CI: confidence interval; df: degrees of freedom; IV: inverse variance; ml/d: millilitre per day; SD: standard deviation

Figure 3: Sugar sweetened beverage intake (≥ daily) (1 year intervention) (follow-up 0-6 months)



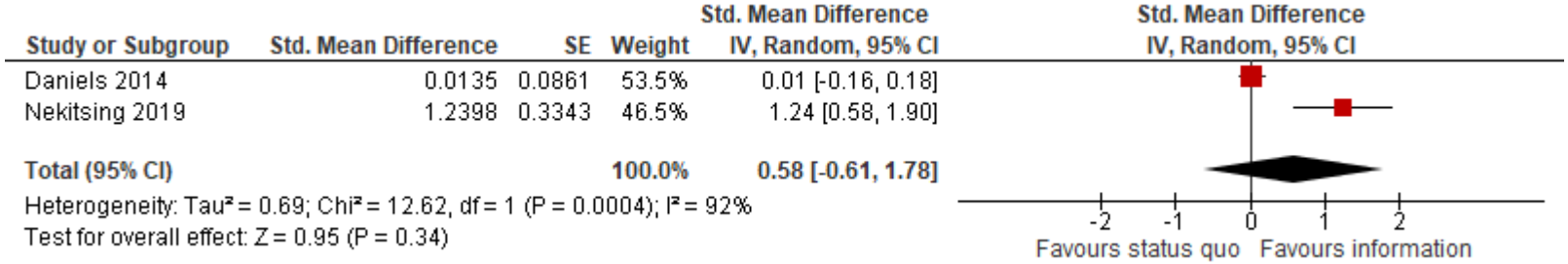
CI: confidence interval; df: degrees of freedom; M-H: Mantel-Haenszel.

Figure 4: Fruit and vegetable intake (6 – 24 months intervention) (follow-up immediately post intervention – 4 months)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised.

Figure 5: Vegetable intake (10 weeks to 1 year intervention) (follow-up 24 weeks to 6 months)

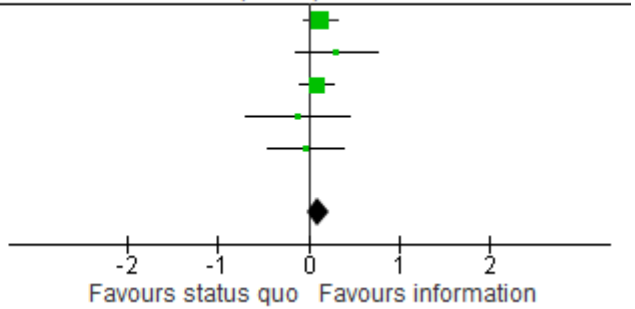


CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised

Figure 6: Vegetable intake (2 weeks to 2 years intervention) (follow-up immediately post-intervention to 42 months)

	Information provision			Status quo				Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Fixed, 95% CI
De Coen 2012	91.2	62.6	268	83.3	57.5	201	41.7%	0.13 [-0.05, 0.31]
Heath 2014	1.6	1.6	43	1.1	1.6	36	7.0%	0.31 [-0.14, 0.75]
Magarey 2016	6.6	7.9057	213	5.9	7.2629	211	38.6%	0.09 [-0.10, 0.28]
Verbestel 2014	86.63	62.56	34	93.49	47.87	18	4.3%	-0.12 [-0.69, 0.46]
Wardle 2003	7.3	12.47	48	7.7	10.61	44	8.4%	-0.03 [-0.44, 0.37]
Total (95% CI)			**606**			**510**	**100.0%**	**0.10 [-0.01, 0.22]**

Heterogeneity: Chi² = 1.92, df = 4 (P = 0.75); I² = 0%
Test for overall effect: Z = 1.72 (P = 0.09)

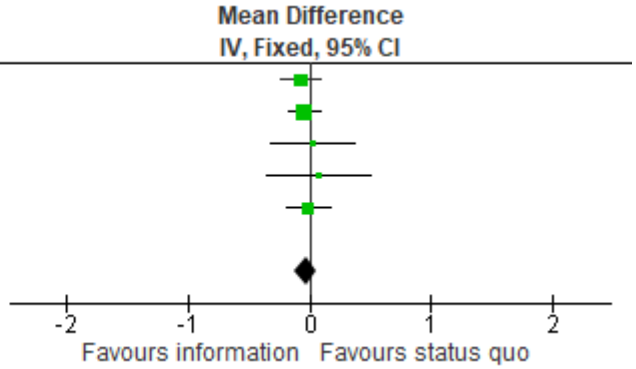


CI: confidence interval; df: degrees of freedom; IV: inverse variance; SD: standard deviation.

Figure 7: BMI z-score (4 months – 2 years intervention) (follow-up immediately post-intervention to 42 months)

	Information provision			Status quo				Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Fixed, 95% CI
Daniels 2015	0.34	0.8757	213	0.41	0.8716	211	26.9%	-0.07 [-0.24, 0.10]
De Coen 2012	0.11	1.03	452	0.15	0.89	299	38.8%	-0.04 [-0.18, 0.10]
Toussaint 2021	0.74	1.08	64	0.71	0.87	59	6.2%	0.03 [-0.32, 0.38]
Verbestel 2014	0.38	0.89	54	0.3	0.98	29	4.1%	0.08 [-0.35, 0.51]
Wen 2022	0.86	1.3	770	0.87	1.5069	385	24.0%	-0.01 [-0.19, 0.17]
Total (95% CI)			**1553**			**983**	**100.0%**	**-0.03 [-0.12, 0.05]**

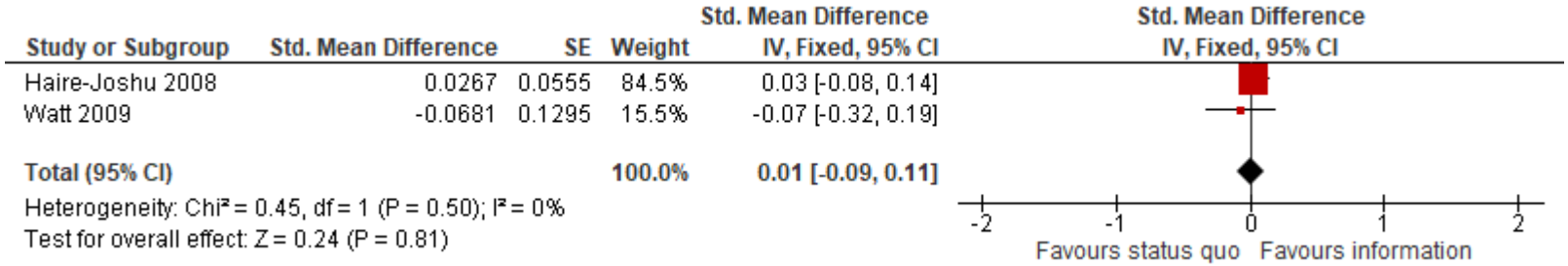
Heterogeneity: Chi² = 0.66, df = 4 (P = 0.96); I² = 0%
Test for overall effect: Z = 0.72 (P = 0.47)



CI: confidence interval; BMI z-score: body mass index z-score; df: degrees of freedom; IV: inverse variance; SD: standard deviation.

Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Low socio-economic status/disadvantaged populations strata (Mixed strata for parental education, and parental age)

Figure 8: Fruit and vegetable intake (<6 months to 9 months intervention) (follow-up immediately post-intervention or unclear)



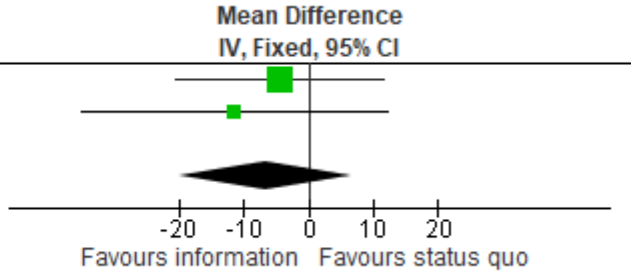
CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised

Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education) – Component 1: Mode of delivery

Figure 9: Sugar sweetened beverage (ml/d) – Face-to-face and printed interventions (1 to 2 years intervention) (follow-up immediately post-intervention)

	Information provision			Status quo				Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Fixed, 95% CI
De Coen 2012	53.7	90.8	268	58.2	86.1	201	68.5%	-4.50 [-20.62, 11.62]
Verbestel 2014	19.07	41.64	38	30.58	46.09	21	31.5%	-11.51 [-35.26, 12.24]
Total (95% CI)			**306**			**222**	**100.0%**	**-6.71 [-20.05, 6.63]**

Heterogeneity: Chi² = 0.23, df = 1 (P = 0.63); I² = 0%
Test for overall effect: Z = 0.99 (P = 0.32)

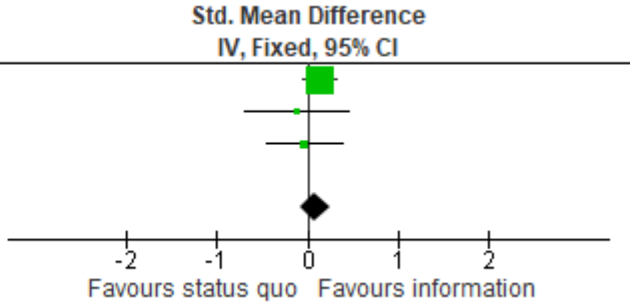


CI: confidence interval; df: degrees of freedom; IV: inverse variance; ml/d: millilitres per day; SD: standard deviation.

Figure 10: Vegetable intake (14 days to 2 year intervention) – Face-to-face and printed interventions (follow-up immediately post intervention)

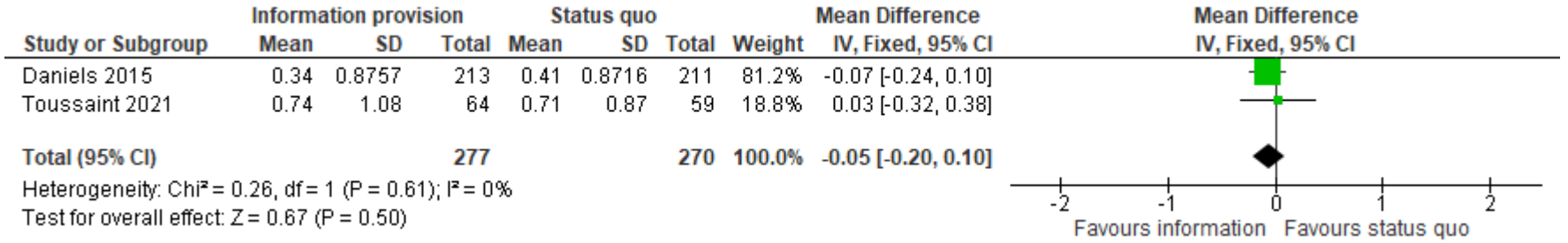
	Information provision			Status quo				Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Fixed, 95% CI
De Coen 2012	91.2	62.6	268	83.3	57.5	201	76.8%	0.13 [-0.05, 0.31]
Verbestel 2014	86.63	62.56	34	93.49	47.87	18	7.9%	-0.12 [-0.69, 0.46]
Wardle 2003	7.3	12.47	48	7.7	10.61	44	15.4%	-0.03 [-0.44, 0.37]
Total (95% CI)			**350**			**263**	**100.0%**	**0.09 [-0.07, 0.25]**

Heterogeneity: Chi² = 1.04, df = 2 (P = 0.59); I² = 0%
Test for overall effect: Z = 1.05 (P = 0.29)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SD: standard deviation.

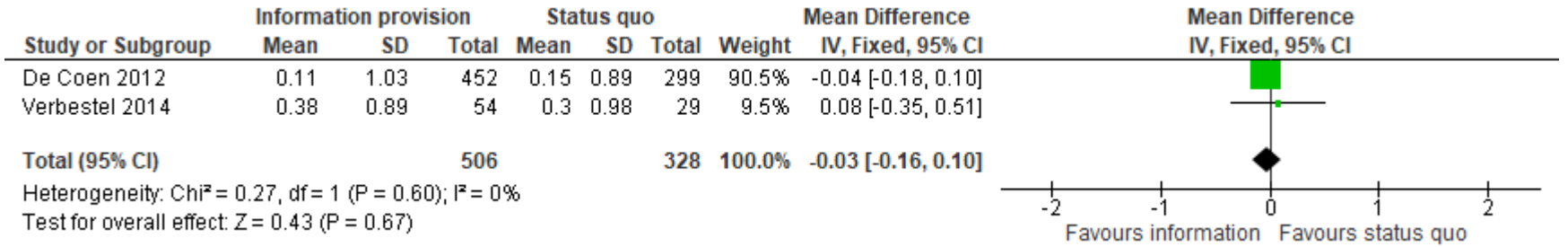
Figure 11: BMI z-score (4 months – 1 year intervention*) – Face-to-face interventions (follow-up 5 to 42 months)



CI: confidence interval; BMI z-score: body mass index z-score; df: degrees of freedom; IV: inverse variance; SD: standard deviation

**Details of intervention in this comparison: 1 year intervention delivered in two 3-month phases with 6 months interval (Daniels 2015).*

Figure 12: BMI z-score (intervention 12 months to 2 years intervention) – Face-to-face and printed interventions (follow-up immediately post-intervention)



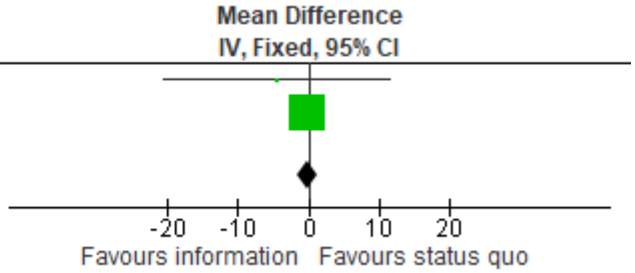
CI: confidence interval; BMI z-score: body mass index z-score; df: degrees of freedom; IV: inverse variance; SD: standard deviation.

Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education) – Component 2: Interventions aimed at individuals or groups

Figure 13: Sugar sweetened beverage (ml/d) (1 to 2 years intervention*) – Interventions aimed at groups (follow-up immediately post-intervention to 42 months)

	Information provision			Status quo				Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Fixed, 95% CI
De Coen 2012	53.7	90.8	268	58.2	86.1	201	0.7%	-4.50 [-20.62, 11.62]
Magarey 2016	2	7.2973	213	2.1	7.2629	211	99.3%	-0.10 [-1.49, 1.29]
Total (95% CI)			**481**			**412**	**100.0%**	**-0.13 [-1.51, 1.25]**

Heterogeneity: Chi² = 0.28, df = 1 (P = 0.59); I² = 0%
Test for overall effect: Z = 0.19 (P = 0.85)

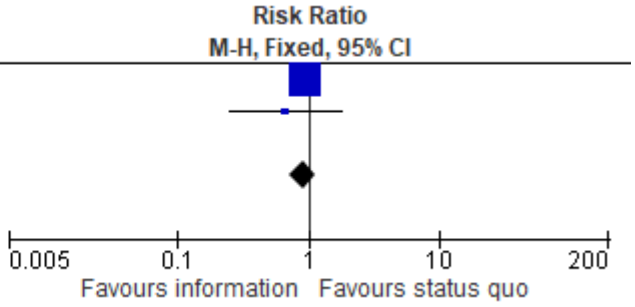


CI: confidence interval; BMI z-score: body mass index z-score; df: degrees of freedom; IV: inverse variance; ml/d: millilitres per day; SD: standard deviation
**Details of intervention in this comparison: 1 year intervention delivered in two 3-month phases with 6 months interval (Magarey 2016).*

Figure 14: Sugar sweetened beverage intake (≥ daily) (1 year intervention*) – Interventions aimed at groups (follow-up immediately post-intervention to 6 months)

	Information provision		Status quo			Risk Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Fixed, 95% CI
Daniels 2014	83	249	95	266	91.0%	0.93 [0.74, 1.18]
Kobel 2019	7	172	8	130	9.0%	0.66 [0.25, 1.78]
Total (95% CI)		**421**		**396**	**100.0%**	**0.91 [0.72, 1.15]**
Total events	90		103			

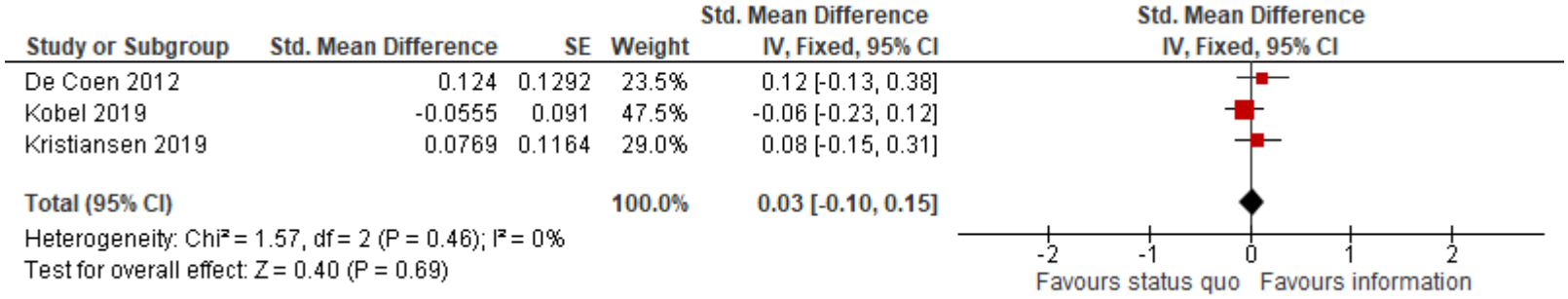
Heterogeneity: Chi² = 0.45, df = 1 (P = 0.50); I² = 0%
Test for overall effect: Z = 0.81 (P = 0.42)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; M-H: Mantel Haenszel

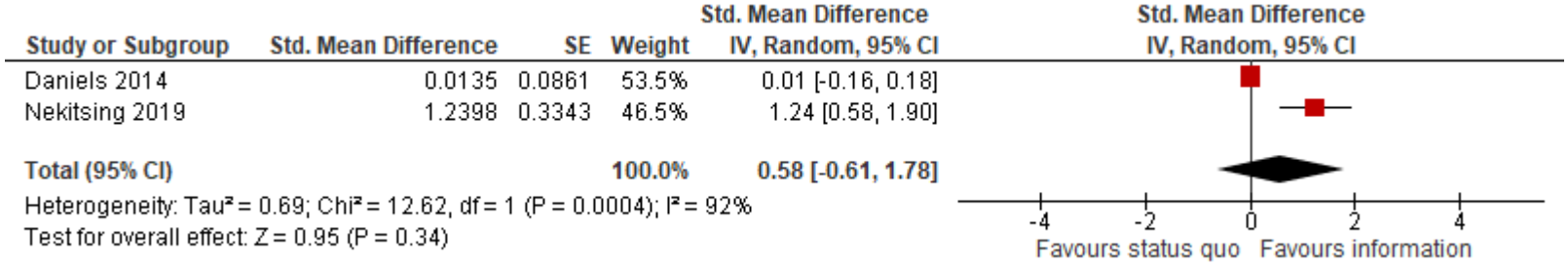
**Details of intervention in this comparison: 1 year intervention delivered in two 3-month phases with 6 months interval (Daniels 2014)*

Figure 15: Fruit and vegetable intake (6 months to 2 years intervention) – interventions aimed at groups (follow up immediately post-intervention to 4 months)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised

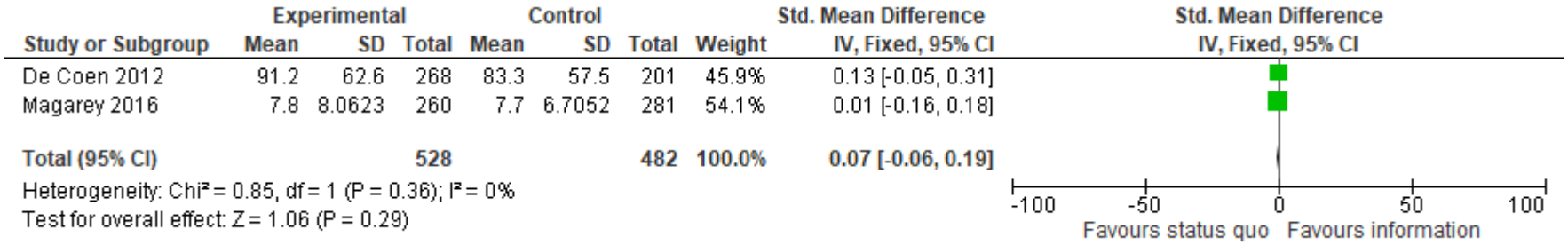
Figure 16: Vegetable intake (10 weeks to 1 year intervention*) - interventions aimed at groups (follow up 24 weeks to 6 months)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised

**Details of intervention in this comparison: 1 year intervention delivered in two 3-month phases with 6 months interval (Daniels 2014)*

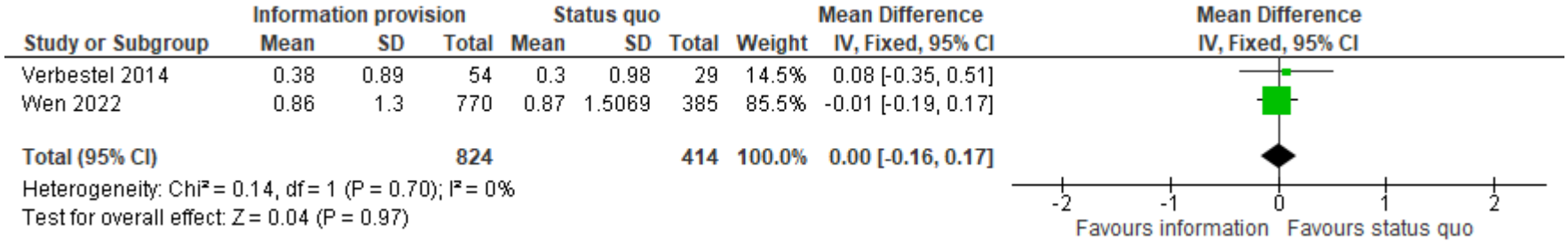
Figure 17: Vegetable intake (1 to 2 years intervention*) – interventions aimed at groups (follow-up immediately post intervention to 42)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SD: standard deviation

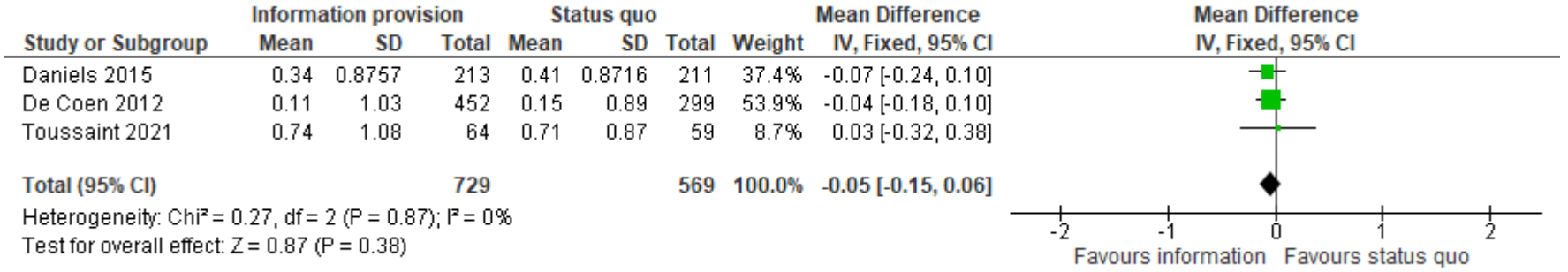
**Details of intervention in this comparison: 1 year intervention delivered in two 3-month phases with 6 months interval (Magarey 2016)*

Figure 18: BMI z-score – (intervention 12 months to 2 years) – interventions aimed at individuals (follow up immediately post-intervention)



CI: confidence interval; BMI z-score: body mass index z-score; df: degrees of freedom; IV: inverse variance; SD: standard deviation

Figure 19: BMI z-score – (4 months to 2 years intervention) – interventions aimed at groups (follow up immediately post-intervention to 42 months)

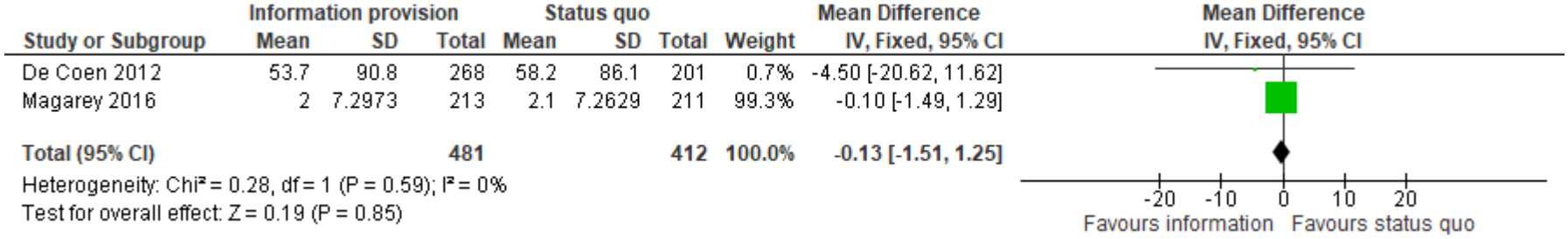


CI: confidence interval; BMI z-score: body mass index z-score; df: degrees of freedom; IV: inverse variance; SD: standard deviation

**Details of intervention in this comparison: 1 year intervention delivered in two 3-month phases with 6 months interval (Daniels 2015)*

Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education) – Component 3: Individualised/tailored interventions based on needs or general interventions, aimed at the population of interest

Figure 20: Sugar sweetened beverage (ml/d) – (1 to 2 years intervention) – General interventions (follow up immediately post intervention to 42 months

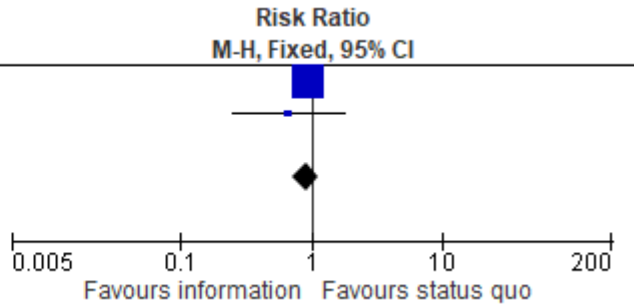


CI: confidence interval; df: degrees of freedom; IV: inverse variance; ml/d: millilitres per day; SD: standard deviation

Figure 21: Sugar sweetened beverage intake (≥ daily) – (1 year intervention*) – General interventions (follow up immediately post-intervention to 6 months)

	Information provision		Status quo			Risk Ratio
Study or Subgroup	Events	Total	Events	Total	Weight	M-H, Fixed, 95% CI
Daniels 2014	83	249	95	266	91.0%	0.93 [0.74, 1.18]
Kobel 2019	7	172	8	130	9.0%	0.66 [0.25, 1.78]
Total (95% CI)		**421**		**396**	**100.0%**	**0.91 [0.72, 1.15]**
Total events	90		103			

Heterogeneity: Chi² = 0.45, df = 1 (P = 0.50); I² = 0%
Test for overall effect: Z = 0.81 (P = 0.42)



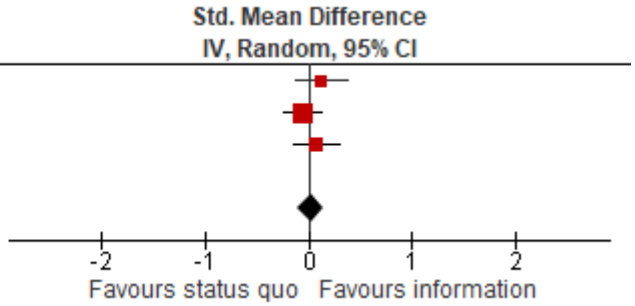
CI: confidence interval; df: degrees of freedom; IV: inverse variance; M-H: mantel-Haenszel

**Details of intervention in this comparison: 1 year intervention delivered in two 3-month phases with 6 months interval (Daniels 2014)*

Figure 22: Fruit and vegetable intake (6 months to 2 years intervention) – general interventions (follow up immediately post-intervention to 4 months)

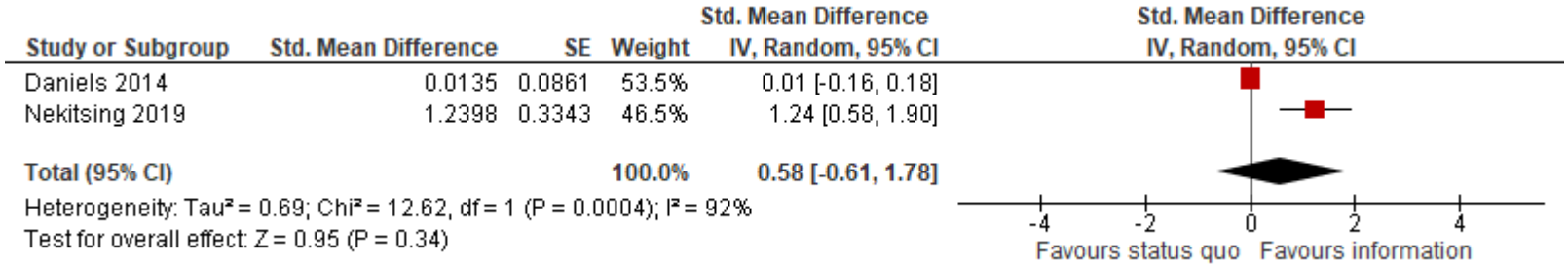
				Std. Mean Difference
Study or Subgroup	Std. Mean Difference	SE	Weight	IV, Random, 95% CI
De Coen 2012	0.124	0.1292	23.5%	0.12 [-0.13, 0.38]
Kobel 2019	-0.0555	0.091	47.5%	-0.06 [-0.23, 0.12]
Kristiansen 2019	0.0769	0.1164	29.0%	0.08 [-0.15, 0.31]
Total (95% CI)			**100.0%**	**0.03 [-0.10, 0.15]**

Heterogeneity: Tau² = 0.00; Chi² = 1.57, df = 2 (P = 0.46); I² = 0%
Test for overall effect: Z = 0.40 (P = 0.69)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised

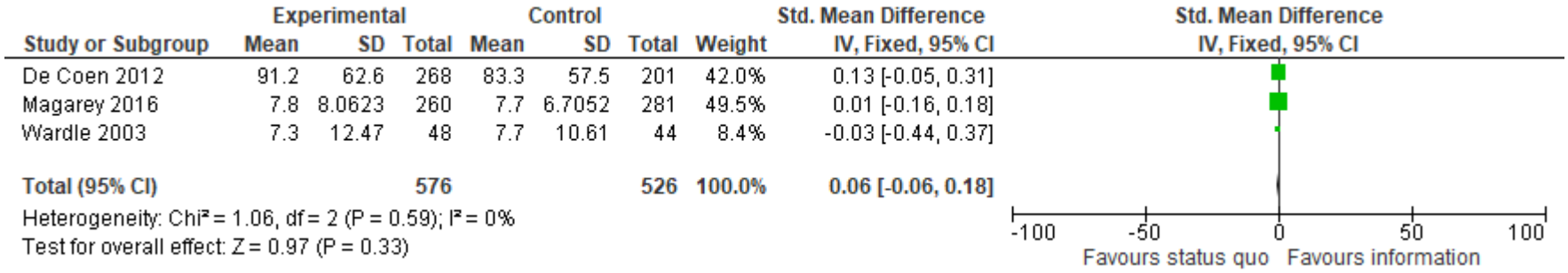
Figure 23: Vegetable intake (10 weeks to 1 year intervention*) – general interventions (follow up 24 weeks to 6 months)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised

**Details of intervention in this comparison: 1 year intervention delivered in two 3-month phases with 6 months interval (Daniels 2014)*

Figure 24: Vegetable intake (14 days to 2 years intervention*) - - general interventions (follow up immediately post-intervention to 42 months)



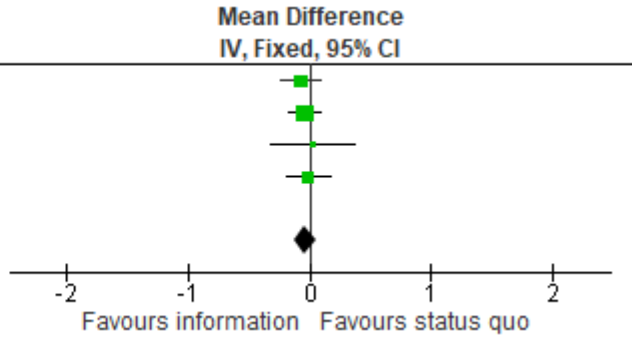
CI: confidence interval; df: degrees of freedom; IV: inverse variance; SD: standard deviation

**Details of intervention in this comparison: 1 year intervention delivered in two 3-month phases with 6 months interval (Magarey 2016)*

Figure 25: BMI z-score (intervention 4 months – 2 years*) – general intervention (follow-up immediately post-intervention to 42 months

	Information provision			Status quo				Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Fixed, 95% CI
Daniels 2015	0.34	0.8757	213	0.41	0.8716	211	28.1%	-0.07 [-0.24, 0.10]
De Coen 2012	0.11	1.03	452	0.15	0.89	299	40.5%	-0.04 [-0.18, 0.10]
Toussaint 2021	0.74	1.08	64	0.71	0.87	59	6.5%	0.03 [-0.32, 0.38]
Wen 2022	0.86	1.3	770	0.87	1.5069	385	25.0%	-0.01 [-0.19, 0.17]
Total (95% CI)			**1499**			**954**	**100.0%**	**-0.04 [-0.12, 0.05]**

Heterogeneity: Chi² = 0.39, df = 3 (P = 0.94); I² = 0%
Test for overall effect: Z = 0.81 (P = 0.42)

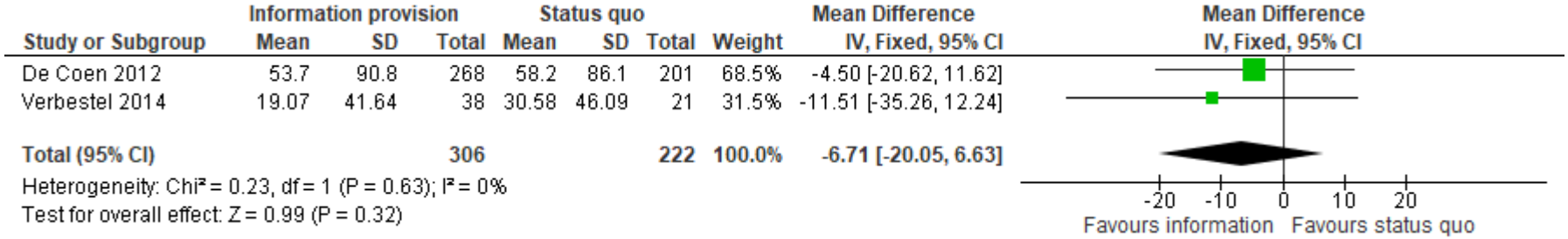


CI: confidence interval; BMI z-score: body mass index z-score; df: degrees of freedom; IV: inverse variance; SD: standard deviation

**Details of intervention in this comparison: 1 year intervention delivered in two 3-month phases with 6 months interval (Daniels 2015)*

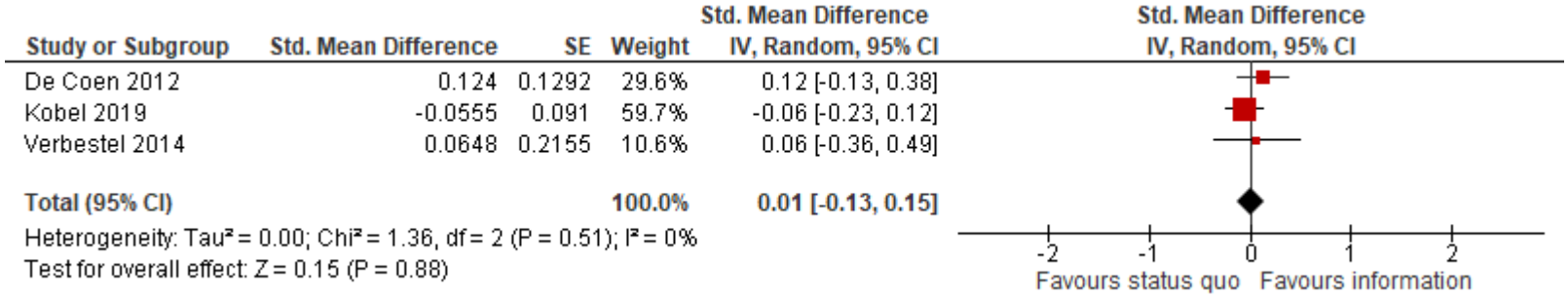
Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education) – Component 5: Where the intervention is delivered

Figure 26: Sugar sweetened beverage (ml/d) (12 months to 2 years intervention) – Nurseries/playgroups/schools (follow up immediately post-intervention)



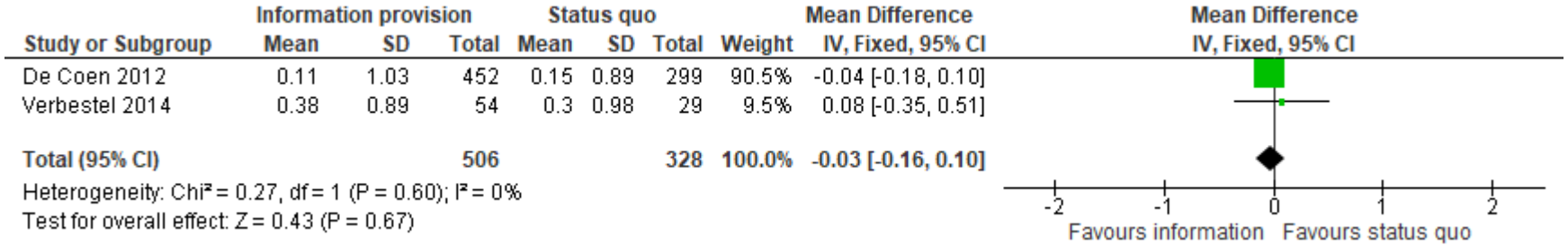
CI: confidence interval; df: degrees of freedom; IV: inverse variance; ml/d: millilitres per day; SD: standard deviation

Figure 27: Fruit and vegetable intake (1 to 2 years intervention) – Nurseries/playgroups/schools (follow up immediately post-intervention)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised

Figure 28: BMI z-score (1 to 2 years intervention) – Nurseries/playgroups/schools (follow-up immediately post intervention



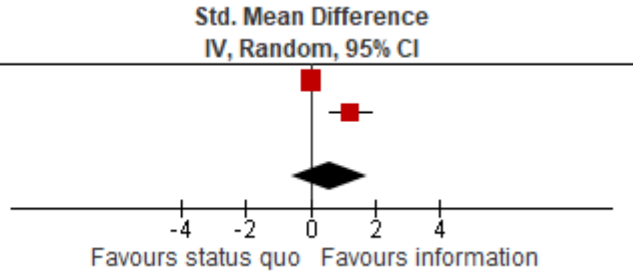
CI: confidence interval; BMI z-score: body mass index z-score; df: degrees of freedom; IV: inverse variance; SD: standard deviation

Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education) – Component 6: Behaviour change models, techniques or theories

Figure 29: Vegetable intake (10 weeks to 1 year intervention*) – No theory mentioned (follow up 24 weeks to 6 months;

Study or Subgroup	Std. Mean Difference	SE	Weight	Std. Mean Difference IV, Random, 95% CI
Daniels 2014	0.0135	0.0861	53.5%	0.01 [-0.16, 0.18]
Nekitsing 2019	1.2398	0.3343	46.5%	1.24 [0.58, 1.90]
Total (95% CI)			**100.0%**	**0.58 [-0.61, 1.78]**

Heterogeneity: Tau² = 0.69; Chi² = 12.62, df = 1 (P = 0.0004); I² = 92%
Test for overall effect: Z = 0.95 (P = 0.34)



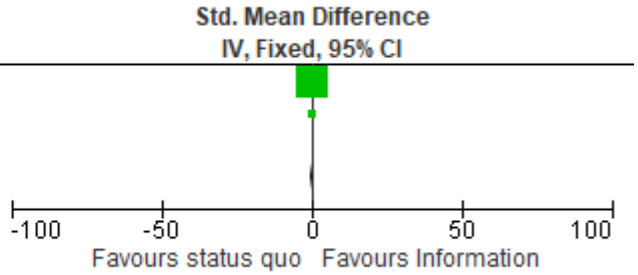
CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised

**Details of intervention in this comparison: 1 year intervention delivered in two 3-month phases with 6 months interval (Daniels 2014)*

Figure 30: Vegetable intake (14 days to 1 year intervention*) – No theory mentioned (follow up immediately post-intervention to 42 months)

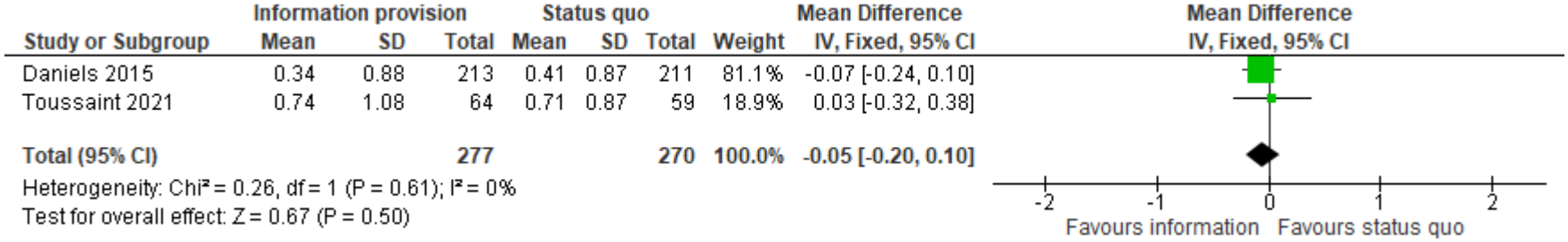
	Experimental			Control				Std. Mean Difference
Study or Subgroup	Mean	SD	Total	Mean	SD	Total	Weight	IV, Fixed, 95% CI
Magarey 2016	7.8	8.0623	260	7.7	6.7052	281	85.5%	0.01 [-0.16, 0.18]
Wardle 2003	7.3	12.47	48	7.7	10.61	44	14.5%	-0.03 [-0.44, 0.37]
Total (95% CI)			**308**			**325**	**100.0%**	**0.01 [-0.15, 0.16]**

Heterogeneity: Chi² = 0.04, df = 1 (P = 0.83); I² = 0%
Test for overall effect: Z = 0.08 (P = 0.93)



CI: confidence interval; BMI z-score: body mass index z-score; df: degrees of freedom; IV: inverse variance; SD: standard deviation
**Details of intervention in this comparison: 1 year intervention delivered in two 3-month phases with 6 months interval (Magarey 2016)*

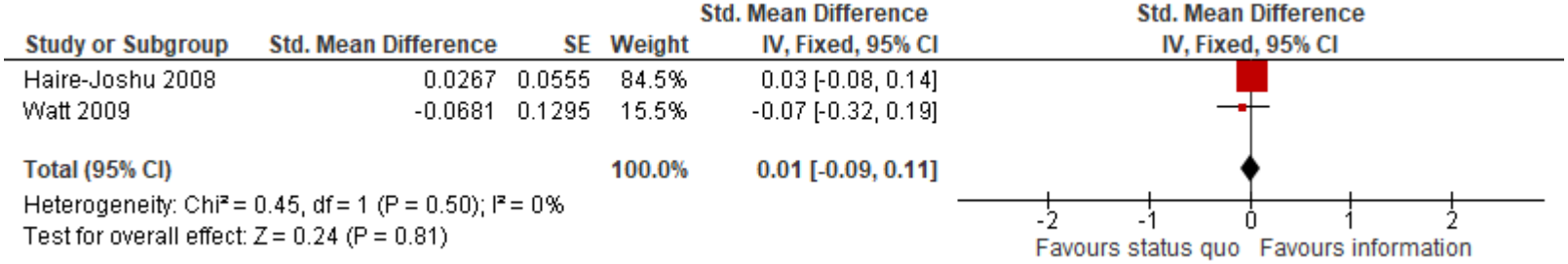
Figure 31: BMI z-score (4 months – 1 year intervention) – No theory mentioned (follow-up 5 – 42 months)



CI: confidence interval; BMI z-score: body mass index z-score; df: degrees of freedom; IV: inverse variance; SD: standard deviation
**Details of intervention in this comparison: 1 year intervention delivered in two 3-month phases with 6 months interval (Daniels 2015)*

Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Low socio-economic status/disadvantaged populations strata (Mixed strata for parental education, and parental age) – Component 2: Interventions aimed at individuals or groups

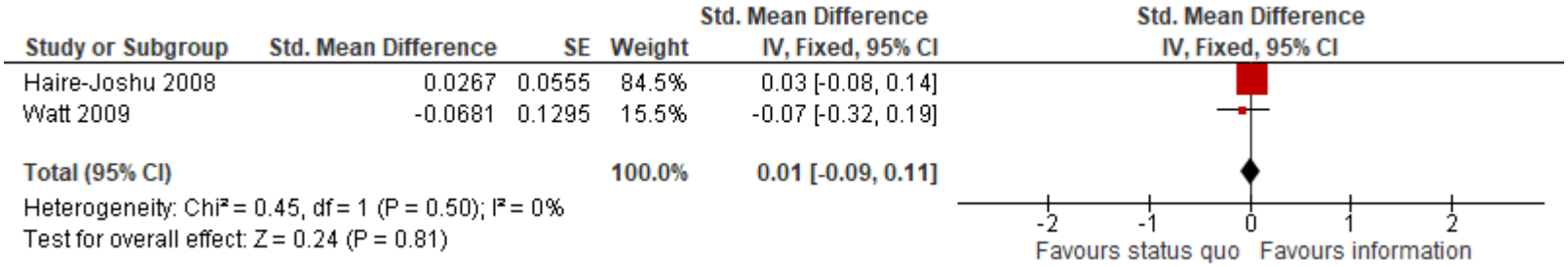
Figure 32: Fruit and vegetable intake (follow-up immediately post-intervention or unclear) – Intervention aimed at individuals



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised

Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Low socio-economic status/disadvantaged populations strata (Mixed strata for parental education, and parental age) – Component 3: Individualised/tailored interventions based on needs or general interventions, aimed at the population of interest

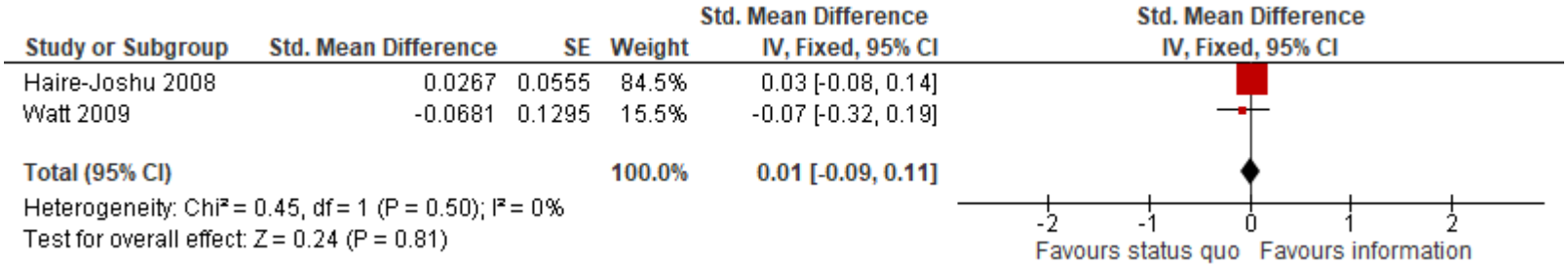
Figure 33: Fruit and vegetable intake (follow-up immediately post-intervention or unclear) – Individualised/tailored interventions based on needs and general interventions



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised

Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Low socio-economic status/disadvantaged populations strata (Mixed strata for parental education, and parental age) – Component 5: where the intervention was delivered

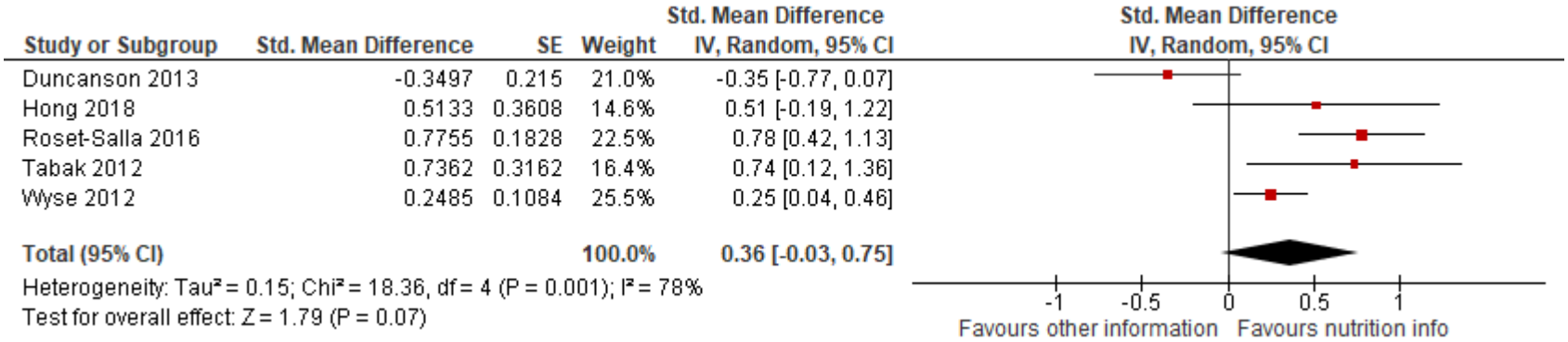
Figure 34: Fruit and vegetable intake (follow-up immediately post-intervention or unclear) – During home visits



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised

Comparison 2: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus control (other information provision)

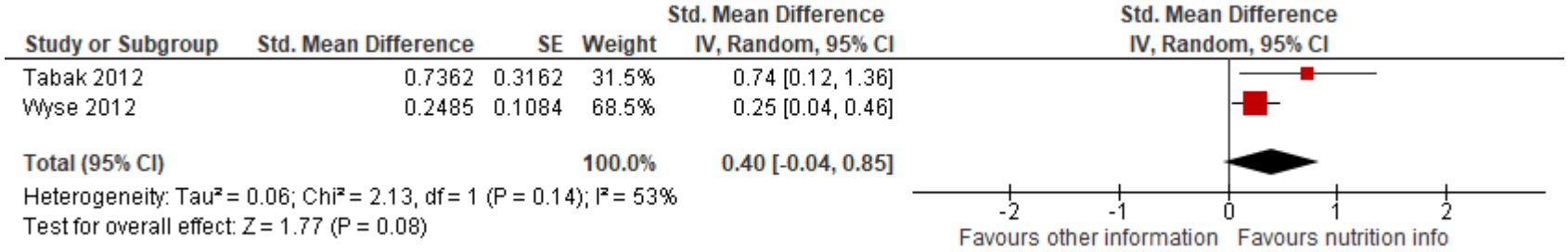
Figure 35: Fruit and vegetable intake (2 weeks to 6 months intervention) (follow-up 5 months)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised.

Comparison 2: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus control (other information provision) – Component 1: Mode of delivery (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Figure 36: Fruit and vegetable intake (4 weeks to 4 months intervention) – Printed and audio (telephone) interventions (follow up immediately post-intervention to 5 months)



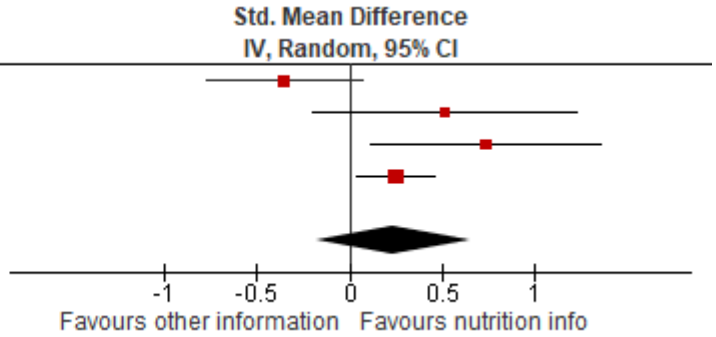
CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised.

Comparison 2: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus control (other information provision) – Component 2: Interventions aimed at individuals or groups (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Figure 37: Fruit and vegetable intake (4 weeks to 12 months intervention) – interventions aimed at individuals (follow up 0-5 months)

Study or Subgroup	Std. Mean Difference	SE	Weight	Std. Mean Difference IV, Random, 95% CI
Duncanson 2013	-0.3497	0.215	27.2%	-0.35 [-0.77, 0.07]
Hong 2018	0.5133	0.3608	18.1%	0.51 [-0.19, 1.22]
Tabak 2012	0.7362	0.3162	20.5%	0.74 [0.12, 1.36]
Wyse 2012	0.2485	0.1084	34.2%	0.25 [0.04, 0.46]
Total (95% CI)			**100.0%**	**0.23 [-0.18, 0.65]**

Heterogeneity: Tau² = 0.12; Chi² = 10.37, df = 3 (P = 0.02); I² = 71%
Test for overall effect: Z = 1.10 (P = 0.27)



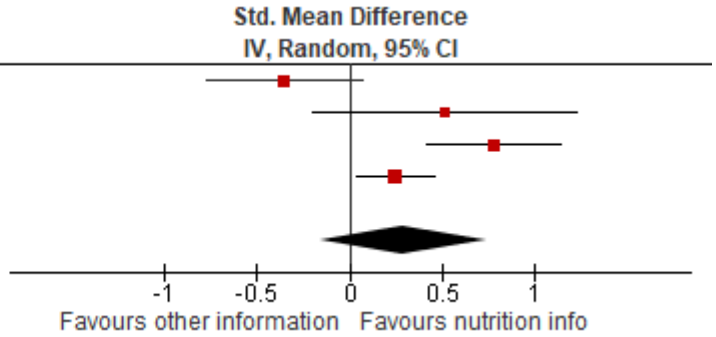
CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised

Comparison 2: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus control (other information provision) – Component 3: individualised/tailored or general interventions (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Figure 38: Fruit and vegetable intake (4 weeks to 12 months intervention) – general interventions (follow up immediately post-intervention to 5 months)

Study or Subgroup	Std. Mean Difference	SE	Weight	Std. Mean Difference IV, Random, 95% CI
Duncanson 2013	-0.3497	0.215	25.1%	-0.35 [-0.77, 0.07]
Hong 2018	0.5133	0.3608	17.8%	0.51 [-0.19, 1.22]
Roset-Salla 2016	0.7755	0.1828	26.8%	0.78 [0.42, 1.13]
Wyse 2012	0.2485	0.1084	30.2%	0.25 [0.04, 0.46]
Total (95% CI)			**100.0%**	**0.29 [-0.16, 0.73]**

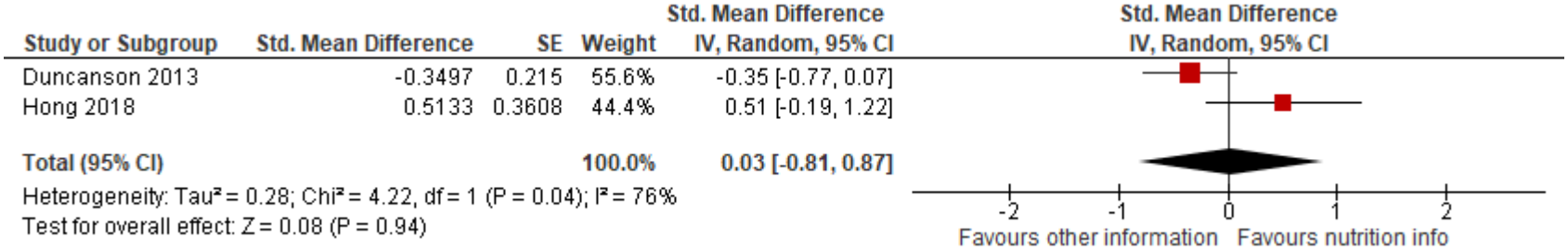
Heterogeneity: Tau² = 0.16; Chi² = 16.43, df = 3 (P = 0.0009); I² = 82%
Test for overall effect: Z = 1.26 (P = 0.21)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised

Comparison 2: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus control (other information provision) – Component 4: Who delivers the intervention? (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

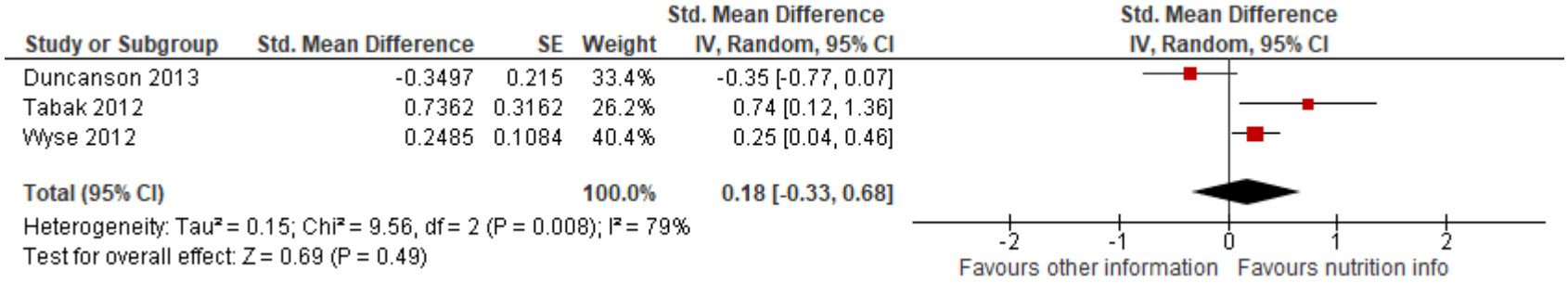
Figure 39: Fruit and vegetable intake (4 weeks to 12 months intervention) – Healthy eating and drinking practices' champion (parents) (follow up immediately post intervention)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised

Comparison 2: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus control (other information provision) – Component 5: Where the intervention was delivered (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

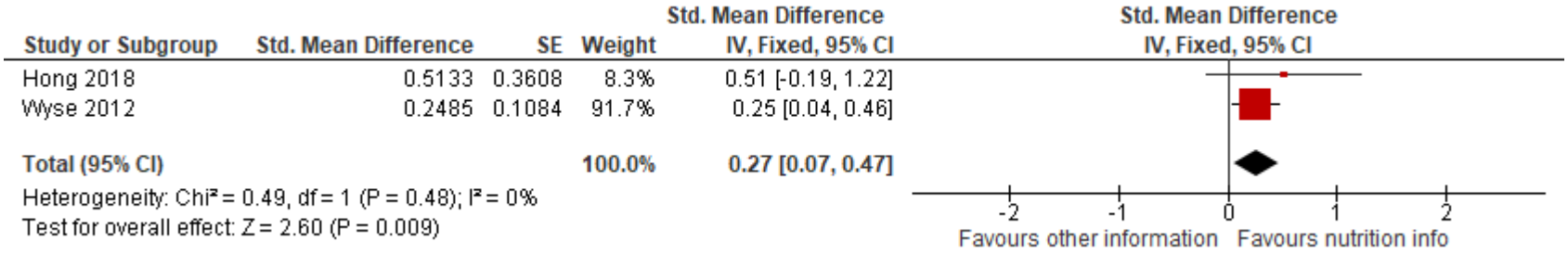
Figure 40: Fruit and vegetable intake (4 weeks to 12 months intervention) – other (at parents' convenience – telephone) (follow up immediately post-intervention to 5 months)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised

Comparison 2: Intervention group 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus control (other information provision) – Component 6: Behaviour change models, techniques and theories (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

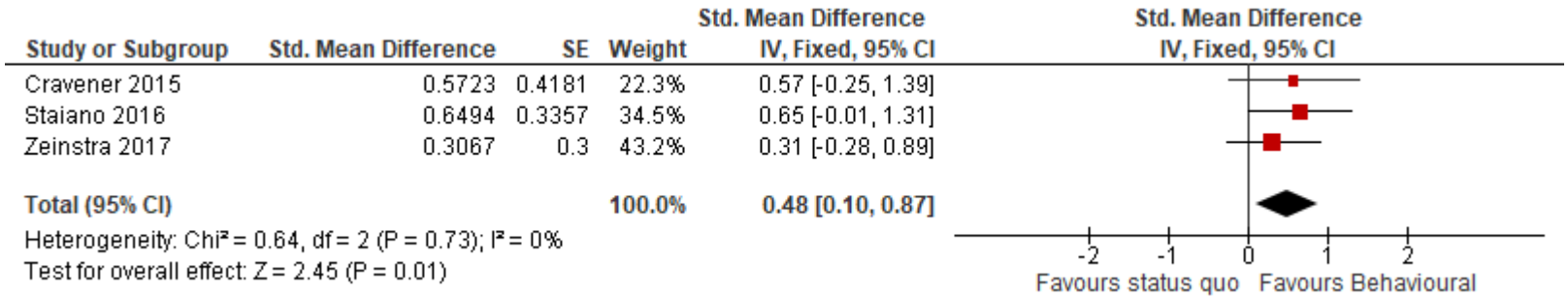
Figure 41: Fruit and vegetable intake (4 weeks intervention) – other (social ecological theory) (follow up immediately post-intervention to 5 months)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised

Comparison 3: Behavioural interventions (for example, role modelling or interventions using praise and rewards) versus status quo (including no treatment)

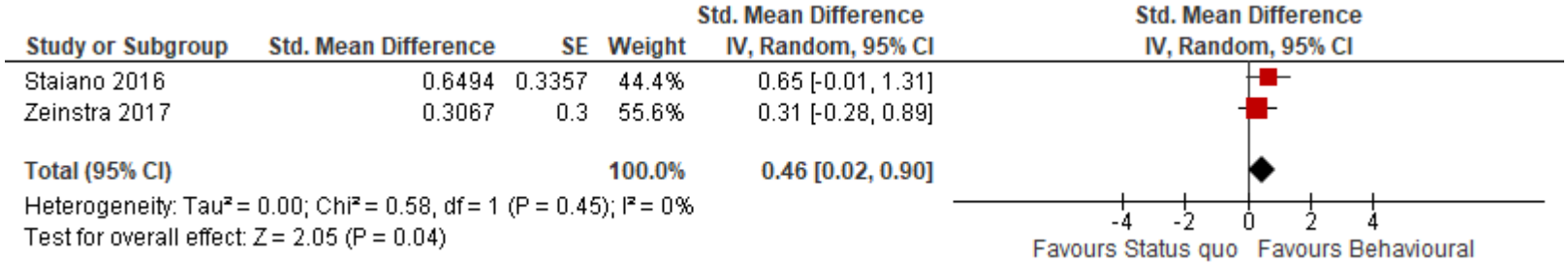
Figure 42: Vegetable intake (1 – 5 weeks intervention) (follow-up range 0 – 7 months)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised.

Comparison 3: Behavioural interventions (for example, role modelling or interventions using praise and rewards) versus status quo (including no treatment) – Component 1: Mode of delivery (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

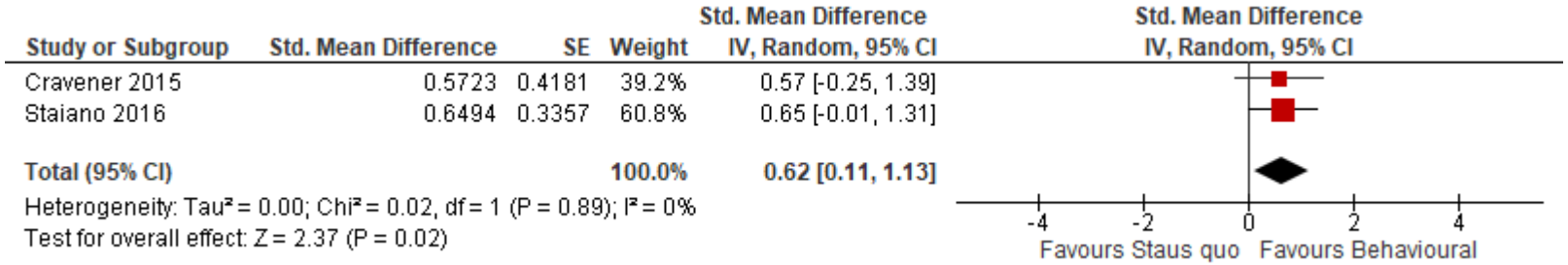
Figure 43: Vegetable intake (~1 week to 5 weeks intervention) – Visual (video) interventions (follow up immediately post intervention to ~7 months)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised.

Comparison 3: Behavioural interventions (for example, role modelling or interventions using praise and rewards) versus status quo (including no treatment) – Component 2: Intervention aimed at individuals or groups (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

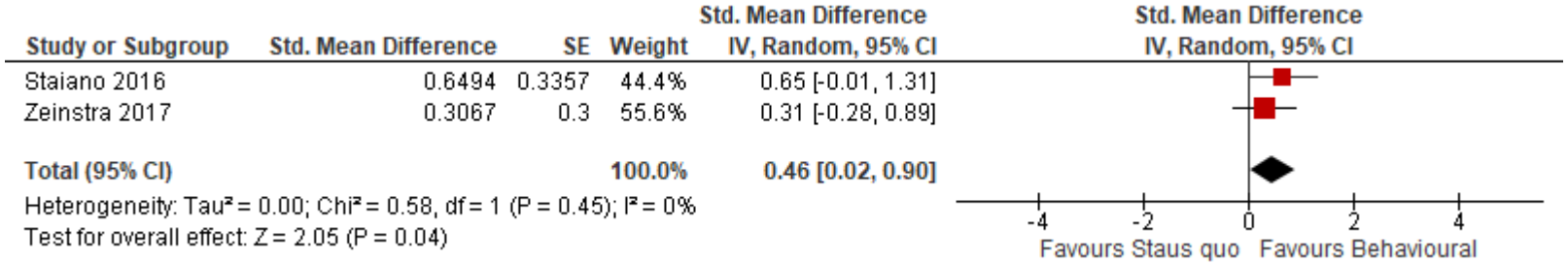
Figure 44: Vegetable intake (~1 to 2 weeks intervention)- interventions aimed at individuals (follow up immediately post intervention to 1 week)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised.

Comparison 3: Behavioural interventions (for example, role modelling or interventions using praise and rewards) versus status quo (including no treatment) – Component 3: individualised/tailored or general interventions (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

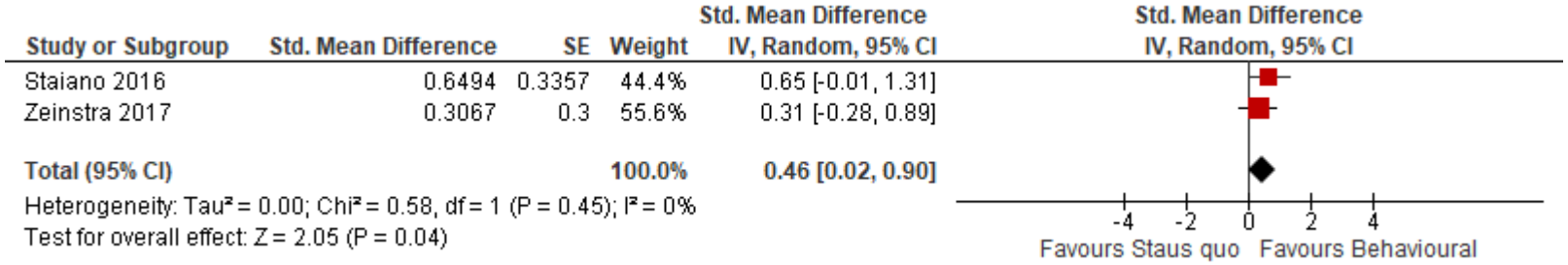
Figure 45: Vegetable intake (~1 week to 5 weeks intervention) – individualised/tailored interventions (follow up immediately post-intervention to ~7 months)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised.

Comparison 3: Behavioural interventions (for example, role modelling or interventions using praise and rewards) versus status quo (including no treatment) – Component 5: Where the intervention was delivered (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

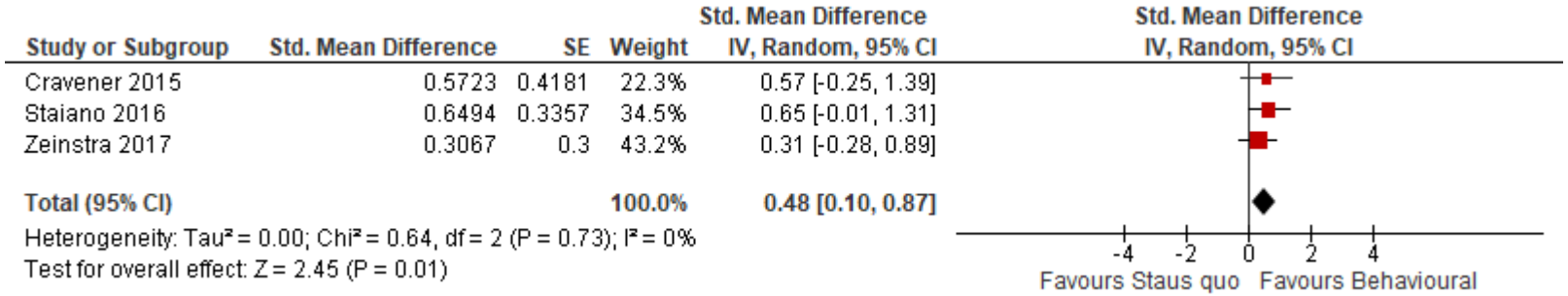
Figure 46: Vegetable intake (~1 week to 5 weeks intervention) – Nurseries/playgroups/schools (follow up immediately post-intervention to ~7 months)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised.

Comparison 3: Behavioural interventions (for example, role modelling or interventions using praise and rewards) versus status quo (including no treatment) – Component 6: Behavioural change models, techniques and theories (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

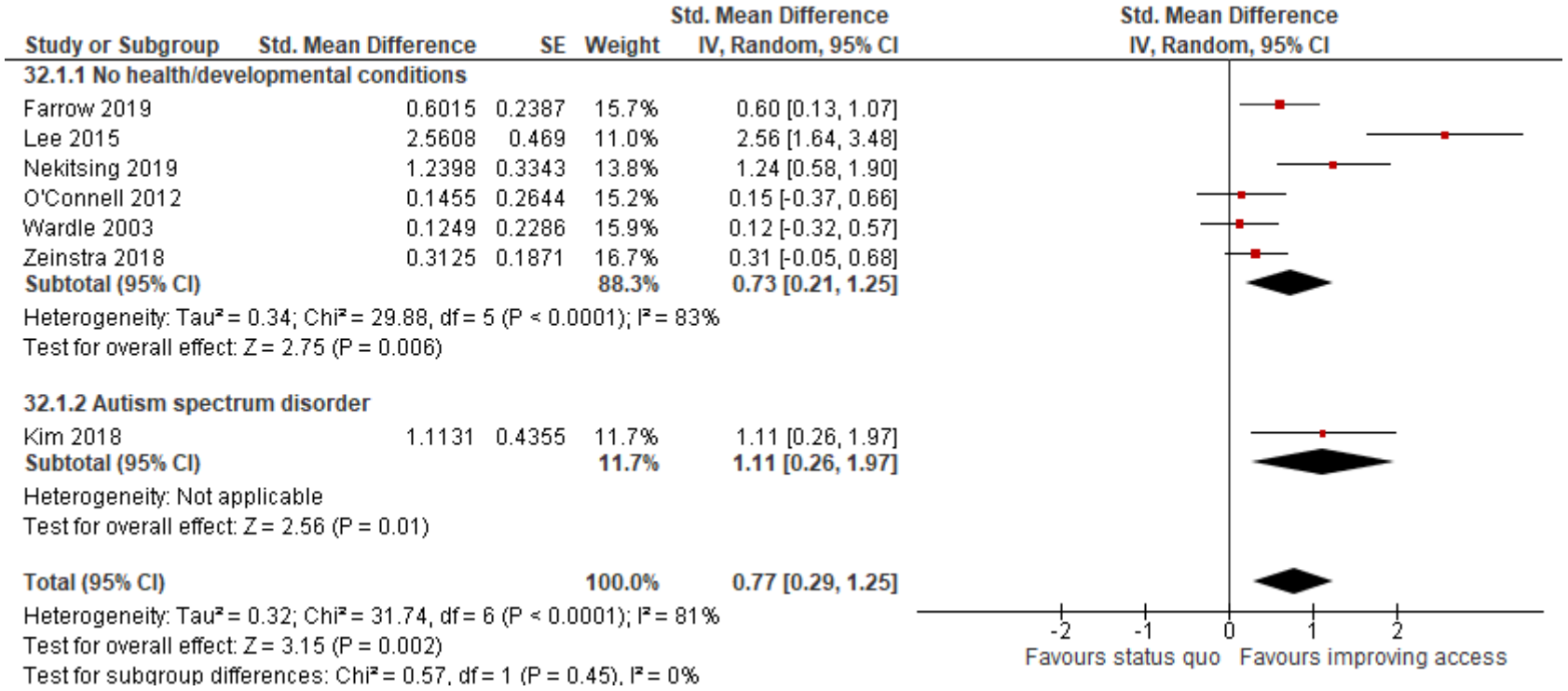
Figure 47: Vegetable intake (~1 to 5 weeks intervention) – No theory mentioned (follow-up immediately post intervention to ~7 months)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised.

Comparison 5: Interventions aimed at improving access to healthy foods and drinks (exposure) versus Status quo (including no treatment)

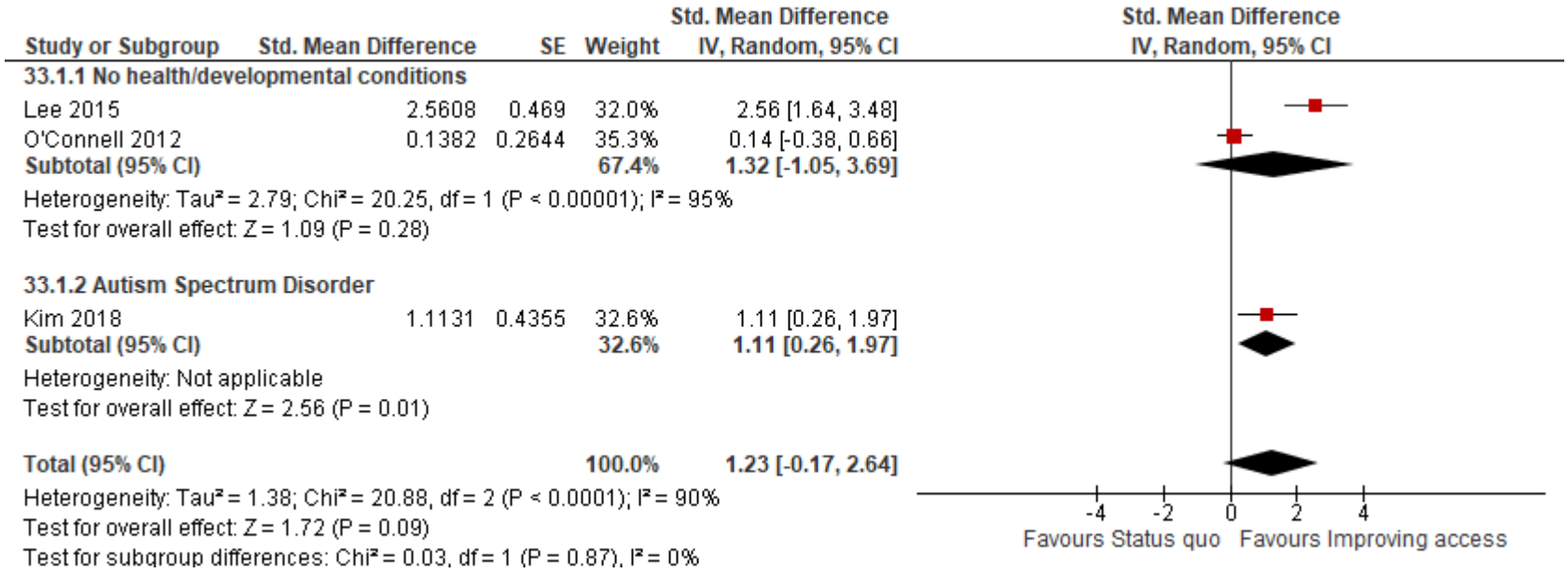
Figure 48: Vegetable intake (1 day to 6 months intervention) (follow-up immediately post-intervention to 24 weeks)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised.

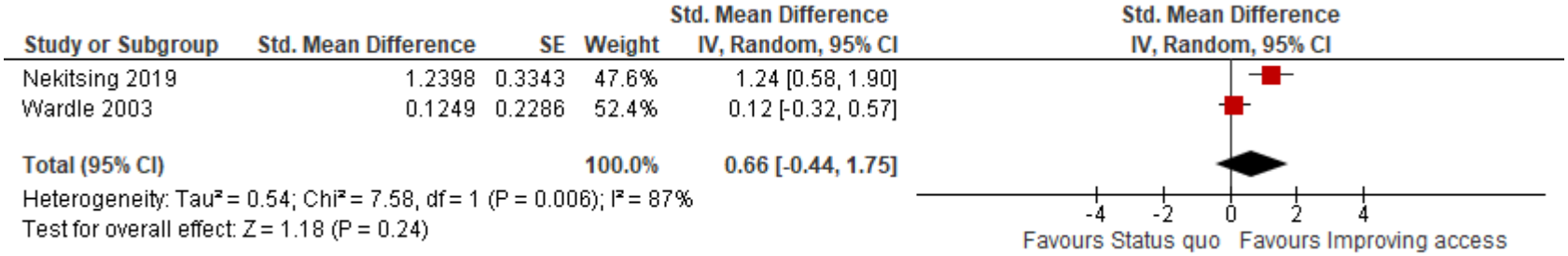
Comparison 5: Interventions aimed at improving access to healthy foods and drinks (exposure) versus Status quo (including no treatment) – Component 1: Mode of delivery (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Figure 49: Vegetable intake – face-to-face interventions (6 weeks to 6 months intervention) (follow up immediately post-intervention)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised

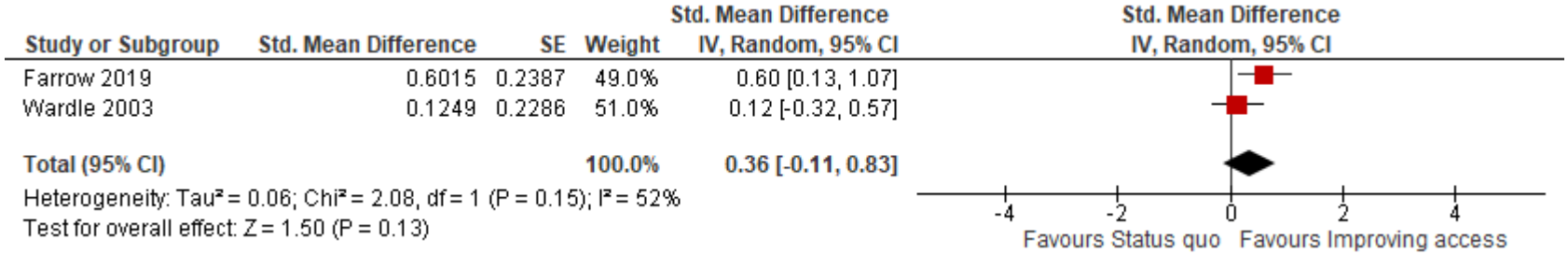
Figure 50: Vegetable intake – face-to-face and printed interventions (14 days to 10 weeks interventions) (follow up immediately post-intervention to 24 weeks)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised

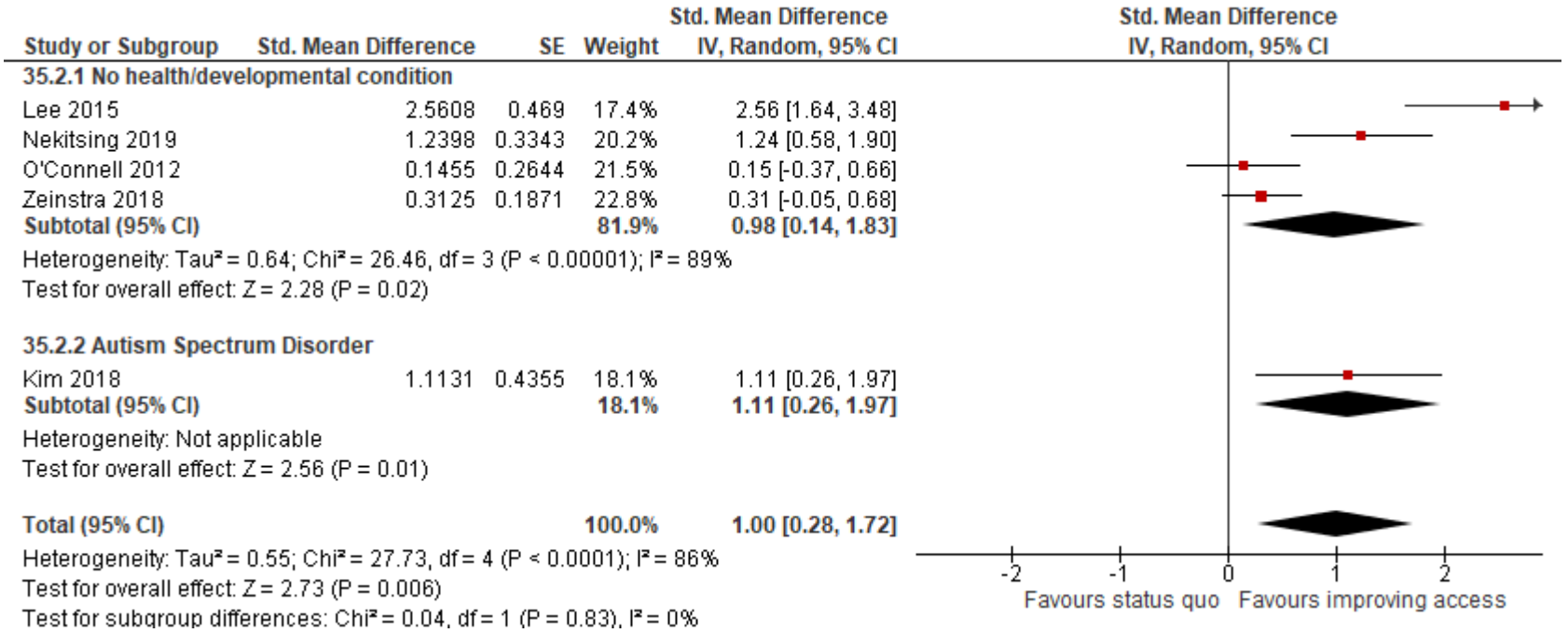
Comparison 5: Interventions aimed at improving access to healthy foods and drinks (exposure) versus Status quo (including no treatment) – Component 2: Intervention aimed at individuals or groups (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Figure 51: Vegetable intake – interventions aimed at individuals (1 to 14 days intervention) (follow up immediately post intervention)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised

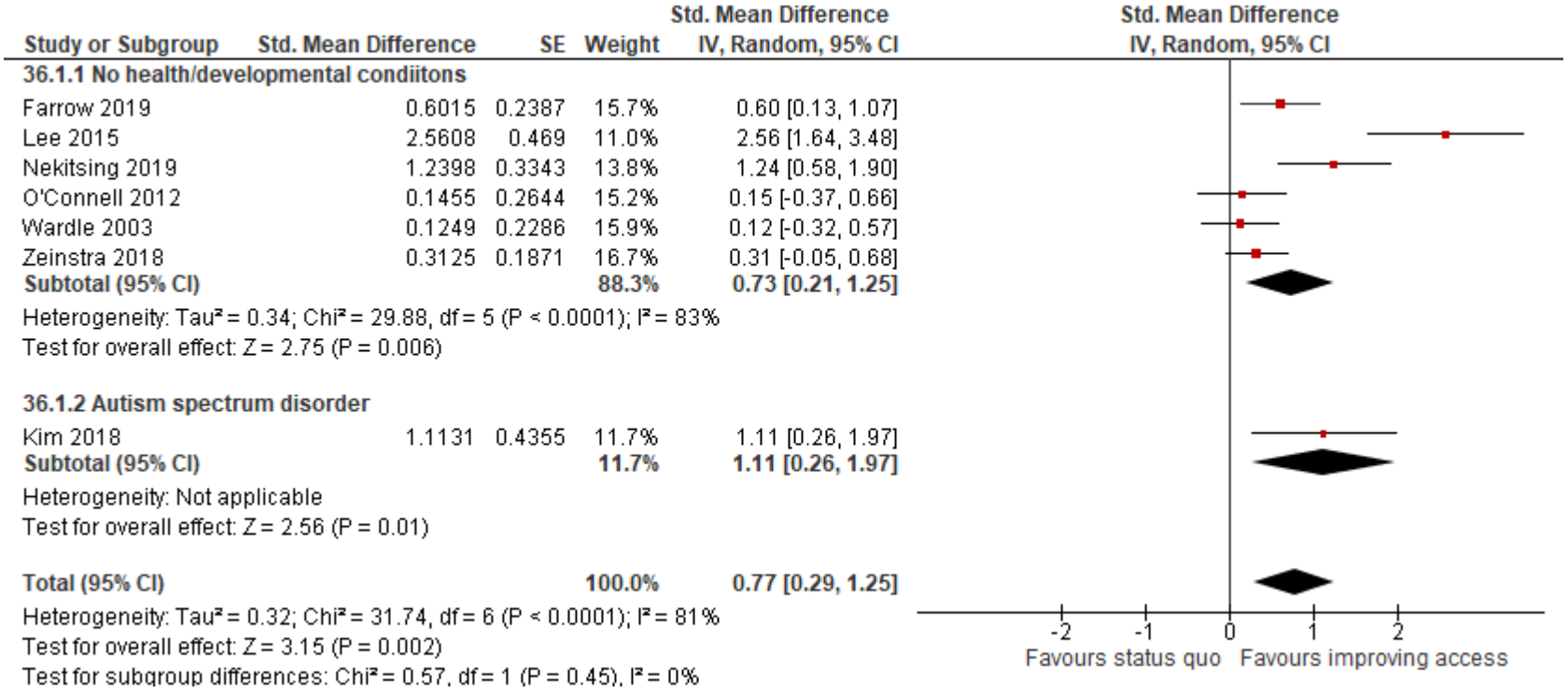
Figure 52: Vegetable intake – interventions aimed at groups (6 weeks to 6 months intervention) (follow up immediately post-intervention to 24 weeks)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised

Comparison 5: Interventions aimed at improving access to healthy foods and drinks (exposure) versus Status quo (including no treatment) – Component 3: individualised/tailored or general interventions (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

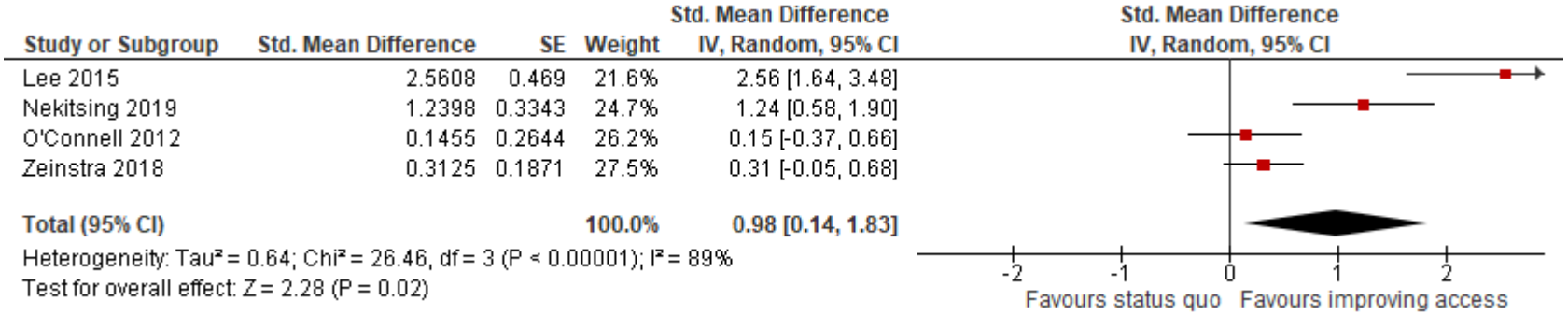
Figure 53: Vegetable intake – general interventions (1 day to 6 months intervention) (follow-up immediately post-intervention to 24 weeks)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised.

Comparison 5: Interventions aimed at improving access to healthy foods and drinks (exposure) versus Status quo (including no treatment) – Component 4: Who delivers the intervention (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Figure 54: Vegetable intake – Early years professional (teachers or preschool staff or childcare employees) (6 weeks to 6 months intervention) (follow-up immediately post-intervention to 24 weeks)



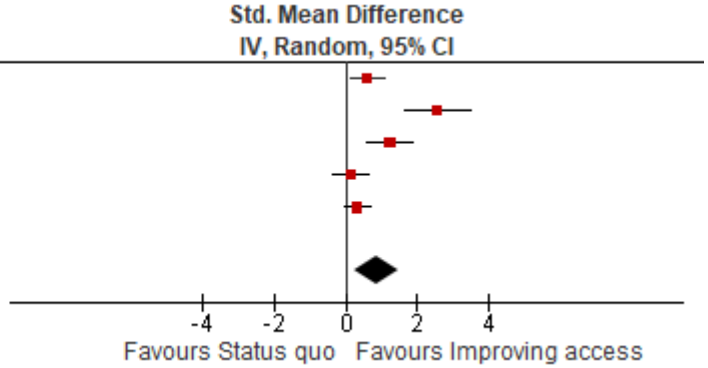
CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised.

Comparison 5: Interventions aimed at improving access to healthy foods and drinks (exposure) versus Status quo (including no treatment) – Component 5: Where the intervention was delivered (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Figure 55: Vegetable intake – Nurseries/play groups/schools (1 day to 6 months intervention) (follow-up immediately post-intervention to 24 weeks)

Study or Subgroup	Std. Mean Difference	SE	Weight	Std. Mean Difference IV, Random, 95% CI
Farrow 2019	0.6015	0.2387	21.5%	0.60 [0.13, 1.07]
Lee 2015	2.5608	0.469	15.9%	2.56 [1.64, 3.48]
Nekitsing 2019	1.2398	0.3343	19.2%	1.24 [0.58, 1.90]
O'Connell 2012	0.1382	0.2644	20.9%	0.14 [-0.38, 0.66]
Zeinstra 2018	0.3125	0.1871	22.5%	0.31 [-0.05, 0.68]
Total (95% CI)			**100.0%**	**0.87 [0.25, 1.50]**

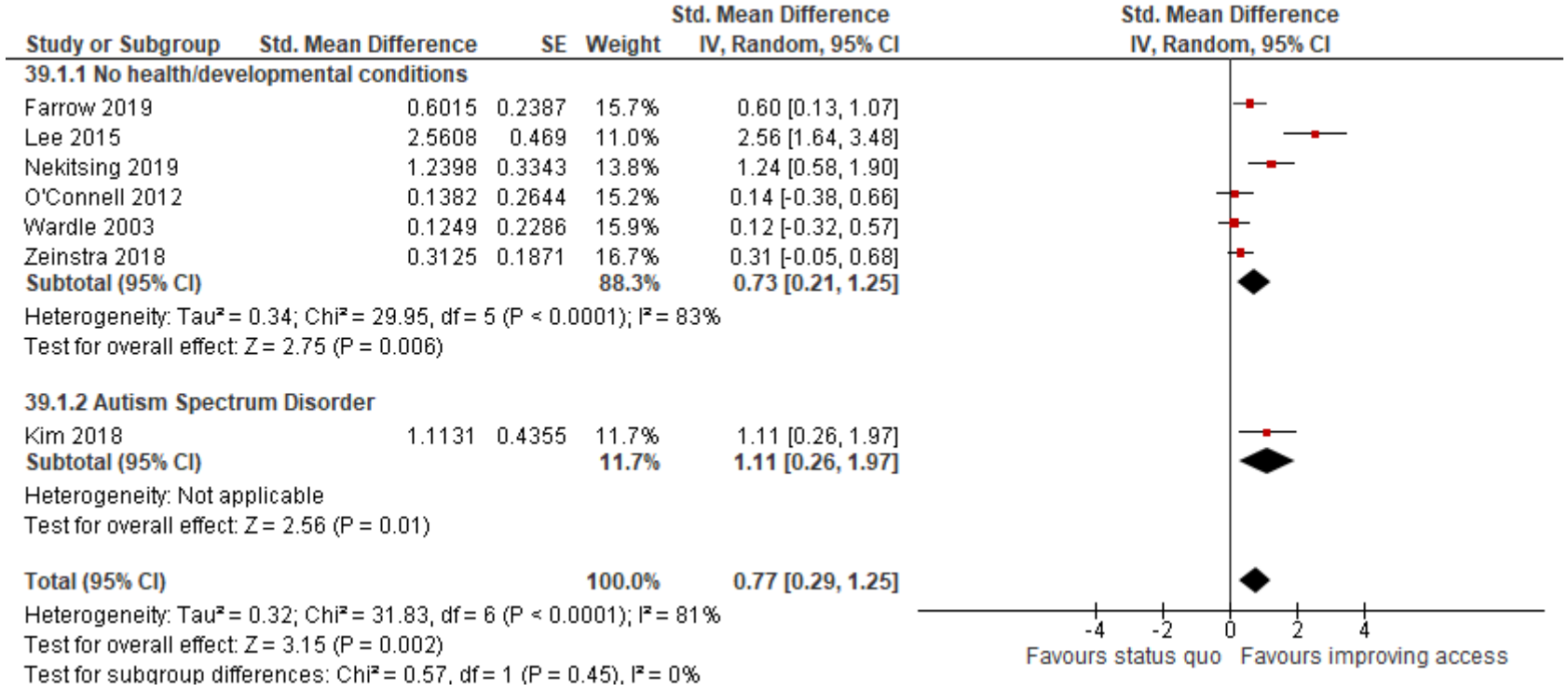
Heterogeneity: Tau² = 0.41; Chi² = 26.55, df = 4 (P < 0.0001); I² = 85%
Test for overall effect: Z = 2.75 (P = 0.006)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised.

Comparison 5: Interventions aimed at improving access to healthy foods and drinks (exposure) versus Status quo (including no treatment) – Component 6: Behavioural change models, techniques and theories (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

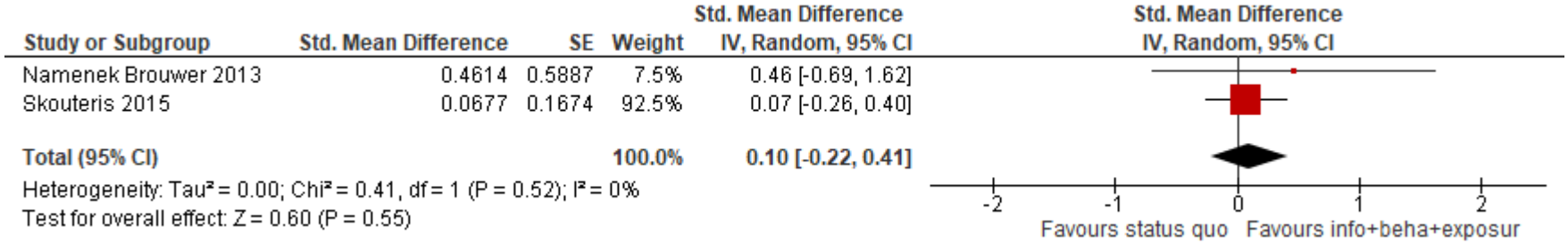
Figure 56: Vegetable intake – No theory mentioned (1 day to 6 months intervention) (follow-up immediately post-interveniton to 24 weeks)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised.

Comparison 8: Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based intervention) versus Status quo (including no treatment)

Figure 57: Fruit and vegetable intake (10 weeks to 4 months intervention) (follow-up 1 to 6 months)

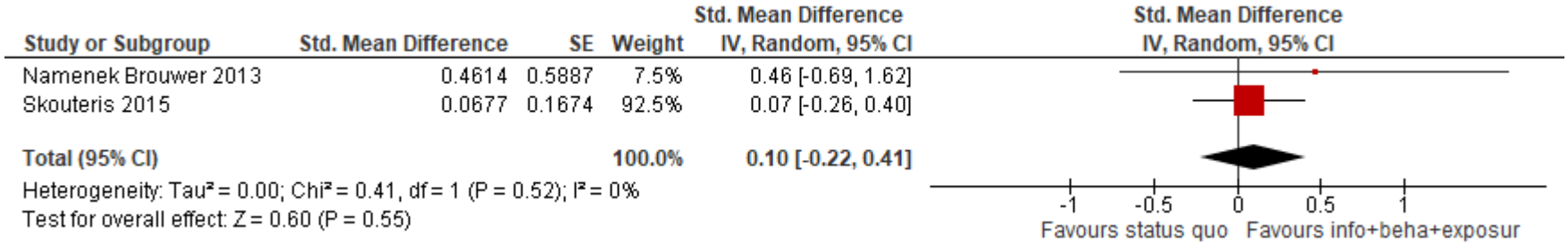


CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised.

Comparison 8: Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based

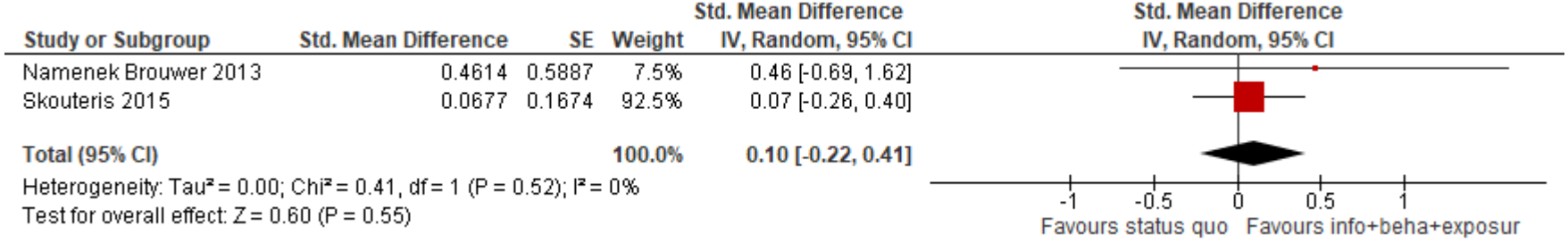
intervention) versus status quo (including no treatment) – Component 1: mode of delivery (Mixed strata for level of socioeconomic deprivation, parental education, and parental age)

Figure 58: Fruit and vegetable intake (10 weeks to 4 months intervention – Face-to-face and printed interventions (follow up 1 to 6 months)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised.

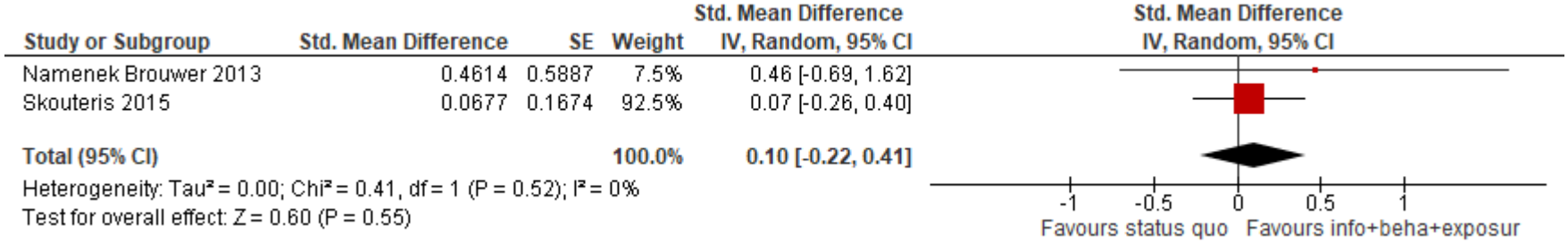
Comparison 8: Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based intervention) versus status quo (including no treatment) – Component 2: Intervention aimed at individuals or groups (Mixed strata for level of socioeconomic deprivation, parental education, and parental age)Figure 59: Fruit and vegetable intake (10 weeks to 4 months intervention) – interventions aimed at groups (follow up 1 to 6 months)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised.

Comparison 8: Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based intervention) versus status quo (including no treatment) – Component 3: Individualised/tailored or general interventions (Mixed strata for level of socioeconomic deprivation, parental education, and parental age)

Figure 60: Fruit and vegetable intake (10 weeks to 4 months intervention) – general interventions (follow-up 1 to 6 months)

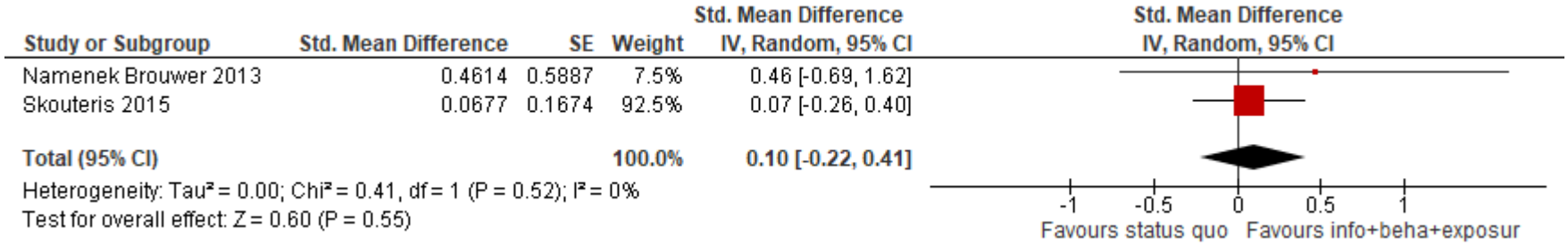


CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised.

Comparison 8: Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based

intervention) versus status quo (including no treatment) – Component 6: Behaviour change models, techniques and theories (Mixed strata for level of socioeconomic deprivation, parental education, and parental age)

Figure 61: Fruit and vegetable intake (10 weeks to 4 months intervention) – No theory mentioned (follow-up 1 to 6 months)



CI: confidence interval; df: degrees of freedom; IV: inverse variance; SE: standard error; Std: standardised.

Appendix F GRADE tables

GRADE tables for review question: What interventions are effective to promote healthy eating and drinking practices, including complementary feeding, for children from 12 months to 5 years (in line with government advice)?

Table 5: Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Sugar sweetened beverage (ml/d) (intervention period 1-2 years) (follow-up immediately post-intervention to 42 months; Better indicated by lower values)												
3[1, 2]	randomised trials	very serious[3]	no serious inconsistency	serious[4]	no serious imprecision	none	519	433	-	MD 0.17 lower (1.55 lower to 1.21 higher)	VERY LOW	CRITICAL **NO IMP. DIFF**.
Sugar sweetened beverage intake (≥ daily) (1 year intervention) (follow-up 0-6 months)												
2[1, 2]	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[5]	None	90/421 (21.4%)	103/396 (26%)	RR 0.91 (0.72 to 1.15)	23 fewer per 1000 (from 73 fewer to 39 more)	VERY LOW	CRITICAL **NO IMP. DIFF**.
Sweetened milk intake (ml/d) (1 year intervention) (follow-up immediately post-intervention; Better indicated by lower values) Components of the intervention (face-to-face and printed interventions, aimed at individuals, tailored and general interventions, delivered by peer (researchers), at nurseries/playgroups/schools, using other (theories of information processing, the elaboration likelihood model and the precaution-adoption process model)												
1 (Verbestel 2014)	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[6]	None	32	17	-	MD 29.6 lower (170.39 lower to 111.19 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**
No sugar sweetened beverage (soft drink, squash for example Ribena or cordial drinks) (2 year intervention) (follow-up immediately post-intervention) Components of the intervention (telephone/SMS intervention, aimed at individuals, general intervention, delivered by healthcare practitioner, health or social care worker (child and family health nurses), over the phone, using the health belief model)												
1 (Wen 2022)	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	None	685/770 (89.0%)	338/385 (87.8%)	RR 1.01 (0.97 to 1.06)	0 fewer per 1000 (from 38 fewer to 38 more)	LOW	CRITICAL **NO IMP. DIFF**.

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Sugar sweetened beverage intake (≥ 3 daily on weekdays) (3 year intervention) (follow-up immediately post-intervention) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general interventions, delivered by healthcare practitioners, health and social care workers (Youth Health Care professionals - community physicians and nurses), at healthcare settings (well-child visits), no theory mentioned)												
1 (Vlasblom 2020)	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	None	240/443 (54.2%)	278/512 (54.3%)	RR 1 (0.89 to 1.12)	0 fewer per 1000 (from 60 fewer to 65 more)	LOW	CRITICAL **NO IMP. DIFF**.
Sugar sweetened beverage intake (≥ 3 daily on weekends) (3 year intervention) (follow-up immediately post-intervention) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general interventions, delivered by healthcare practitioners, health and social care workers (Youth Health Care professionals - community physicians and nurses), at healthcare settings (well-child visits), no theory mentioned)												
1 (Vlasblom 2020)	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	None	269/443 (60.7%)	300/512 (58.6%)	RR 1.04 (0.93 to 1.15)	23 more per 1000 (from 41 fewer to 88 more)	LOW	CRITICAL **NO IMP. DIFF**.
Fruit and vegetable intake (6 to24 months intervention) (follow-up immediately post-intervention to 4 months; Better indicated by higher values)												
4[1]	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	None	909	734	-	SMD 0.03 higher (0.09 lower to 0.15 higher)*	LOW	CRITICAL **NO IMP. DIFF**.
Fruit and vegetable intake (6 to8 month intervention) (follow-up 1 to3 months; Better indicated by higher values) Components of the intervention (face-to-face and printed interventions, aimed at groups, tailored and general interventions, delivered by healthcare practitioner, health or social care worker (dieticians, kinesiologists or other experts in nutrition and physical activity), at community venues (early childcare centres), using the socioecological model)												
1 (Leis 2020)	randomised trials	serious[7]	no serious inconsistency	no serious indirectness	no serious imprecision	None	246	217	-	MD 0.05 higher (0.07 lower to 0.17 higher)	MODERATE	CRITICAL **NO IMP. DIFF**.
Fruit intake (g/kg body weight) (1 year intervention) (follow-up 42 months; Better indicated by higher values) Components of the intervention (face-to-face intervention, aimed at groups, general intervention, delivered by healthcare practitioner, health or social care worker (dieticians, psychologists), at healthcare setting (Child health clinics), no theory mentioned)												
1 (Magarey 2016)[2]	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	None	213	211	-	MD 0.7 higher (0.96 lower to 2.36 higher)	LOW	CRITICAL **NO IMP. DIFF**.
Fruit intake ≤ 2 serves a day (2 year intervention) (follow-up immediately post-intervention) Components of the intervention (telephone/SMS intervention, aimed at individuals, general intervention, delivered by healthcare practitioner, health or social care worker (child and family health nurses), over the phone, using the health belief model)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
1 (Wen 2022)	randomised trials	serious[7]	no serious inconsistency	no serious indirectness	no serious imprecision	None	582/770 (75.6%)	273/385 (70.9%)	RR 1.07 (0.99 to 1.15)	50 more per 1000 (from 7 fewer to 106 more)	MODERATE	CRITICAL **NO IMP. DIFF.**
Vegetable intake (10 weeks to 1 year intervention) (follow-up 24 weeks to 6 months; Better indicated by higher values)												
2[1, 2]	randomised trials	very serious[3]	very serious[8]	no serious indirectness	very serious[9]	None	313	265	-	SMD 0.58 higher (0.61 lower to 1.78 higher)*	VERY LOW	CRITICAL **NO EV. OF IMP. DIFF**
Vegetable intake (14 days to 2 years intervention) (follow-up immediately post intervention to 42 months; Better indicated by higher values)												
5[1, 2]	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	None	606	510	-	SMD 0.10 higher (0.01 lower to 0.22 higher)*	LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake (≤2 serves /day) (2 year intervention) (follow-up immediately post-intervention) Components of the intervention (telephone/SMS intervention, aimed at individuals, general intervention, delivered by healthcare practitioner, health or social care worker (child and family health nurses), over the phone, using the health belief model)												
1 (Wen 2022)	randomised trials	serious[7]	no serious inconsistency	no serious indirectness	no serious imprecision	none	451/770 (58.6%)	211/385 (54.8%)	RR 1.07 (0.96 to 1.19)	38 more per 1000 (from 22 fewer to 104 more)	MODERATE	CRITICAL **NO IMP. DIFF.**
Vegetable intake (g) (2 weeks intervention) (follow-up immediately post-intervention; Better indicated by higher values) Components of the intervention (printed (picture book) and visual intervention, aimed at individuals, general intervention, delivered by parents, at home, no theory mentioned)												
1 (Heath 2014)	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[6]	None	43	36	-	MD 0.5 higher (0.21 lower to 1.21 higher)	VERY LOW	CRITICAL **NO IMP. DIFF**.
Fruit and vegetable acceptance score (theoretical range 0-125) (3-4 weeks intervention) (follow-up immediately post-intervention; Better indicated by higher values) Components of the intervention (electronic (mobile app) intervention, aimed at individuals, general intervention, delivered by peers (researchers explained the app to participants and experts in nutrition science, food education and early childhood education and care (ECEC) developed the app), at ECEC centres, using social cognitive theory)												
1 (Vepsalainen 2022)	randomised trials	very serious[3]	no serious inconsistency	serious[4]	serious[6]	None	82	79	-	MD 6.1 higher (2.69 lower to 14.89 higher)	VERY LOW	CRITICAL **NO IMP. DIFF**.
CDQ – Fruit and vegetable absolute score (target ≥18) (1 year intervention) (follow-up 42 months; Better indicated by higher values) Components of the intervention (face-to-face intervention, aimed at groups, general intervention, delivered by healthcare practitioners, health or social care worker (dieticians, psychologists), at healthcare setting (Child health clinics), no theory mentioned												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
1 (Magarey 2016)[2]	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	None	213	211	-	MD 0.5 higher (0.33 lower to 1.33 higher)	LOW	CRITICAL **NO IMP. DIFF**.
CDQ – Non-milk sweetened beverage (target ≤ 1) (1 year intervention) (follow-up 42 months; Better indicated by lower values) Components of the intervention (face-to-face intervention, aimed at groups, general intervention, delivered by healthcare practitioner, health or social care worker (dieticians, psychologists), at healthcare setting (Child health clinics), no theory mentioned)												
1 (Magarey 2016)[2]	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	None	213	211	-	MD 0.1 higher (0.04 lower to 0.24 higher)	LOW	CRITICAL **NO IMP. DIFF**.
Healthy eating habits (percentage of meals and snacks over 3 days that included a fruit and/or vegetable, a source of protein, and no sweets or junk food (possible range = 0-100) (10 weeks intervention) (follow-up 1 weeks; Better indicated by higher values) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by peer (Early Head Start home visitor), during home visits, no theory mentioned)												
1 (Nix 2021)	randomised trials	serious[7]	no serious inconsistency	no serious indirectness	serious[6]	None	36	30	-	MD 0.04 higher (0.01 lower to 0.09 higher)	LOW	CRITICAL **NO IMP. DIFF**.
Did not consume any fruit (%) (1 year intervention) (follow-up 6 months) Components of the intervention (face-to-face intervention, aimed at groups, general intervention, delivered by healthcare practitioner, health or social care worker (dieticians, psychologists), at healthcare setting (Child health clinics), no theory mentioned)												
1 (Daniels 2014)[2]	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	very serious[10]	None	20/249 (8%)	31/266 (11.7%)	RR 0.69 (0.4 to 1.17)	36 fewer per 1000 (from 70 fewer to 20 more)	VERY LOW	CRITICAL **NO EV. OF IMP. DIFF.**
Did not consume any vegetable (%) (1 year intervention) (follow-up 6 months) Components of the intervention (face-to-face intervention, aimed at groups, general intervention, delivered by healthcare practitioner, health or social care worker (dieticians, psychologists), at healthcare setting (Child health clinics), no theory mentioned)												
1 (Daniels 2014)[2]	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	very serious[10]	None	52/249 (20.9%)	50/266 (18.8%)	RR 1.11 (0.78 to 1.54)	21 more per 1000 (from 41 fewer to 102 more)	VERY LOW	CRITICAL **NO IMP. DIFF**.
BMI z-score (4 months – 2 years intervention) (follow-up immediately post-intervention to 42 months; Better indicated by lower values)												
5[1, 2]	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	None	1553	983	-	MD 0.03 lower (0.12 lower to 0.05 higher)	LOW	CRITICAL **NO IMP. DIFF.**

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
BMI (kg/m^2) (4 months nutrition intervention) (follow-up 5 months; Better indicated by lower values) Components of the intervention (face-to-face intervention, aimed at groups, general intervention, delivered by peer (research staff) and healthy eating and drinking champion (coach of childcare organisation) , at unknown location, no theory mentioned)												
1 (Toussaint 2021)	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[6]	None	64	59	-	MD 0.09 higher (0.41 lower to 0.59 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**
BMI percentile (1 year intervention) (follow-up immediately post-intervention; Better indicated by lower values) Components of the intervention (face-to-face and printed interventions, aimed at groups, general interventions, delivered by early years professionals (teachers), at nurseries/play groups/ schools, using social cognitive theory and social ecological approach)												
1 (Kobel 2019)	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	172	130	-	MD 0.3 higher (5.68 lower to 6.28 higher)	LOW	CRITICAL **NO IMP. DIFF.**
BMI Standard Deviation Score (SDS) immediately post-intervention (3 year intervention) (follow-up immediately post-intervention; Better indicated by lower values) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general interventions, delivered by healthcare practitioners, health and social care workers (Youth Health Care professionals - community physicians and nurses), at healthcare settings (well-child visits), no theory mentioned)												
1 (Vlasblom 2020)	randomised trials	serious[7]	no serious inconsistency	no serious indirectness	no serious imprecision	none	603	732	-	MD 0.09 higher (0.02 lower to 0.2 higher)	MODERATE	CRITICAL **NO IMP. DIFF.**
Drinking from a cup (2 year intervention) (follow-up immediately post-intervention) Components of the intervention (telephone/SMS intervention, aimed at individuals, general intervention, delivered by healthcare practitioner, health or social care worker (child and family health nurses), over the phone, using the health belief model)												
1 (Wen 2022)	randomised trials	serious[7]	no serious inconsistency	no serious indirectness	no serious imprecision	none	656/770 (85.2%)	297/385 (77.1%)	RR 1.11 (1.04 to 1.19)	85 more per 1000 (from 31 more to 147 more)	MODERATE	IMPORTANT **NO IMP. DIFF.**
No bottle at bedtime (2 year intervention) (follow-up immediately post-intervention) Components of the intervention (telephone/SMS intervention, aimed at individuals, general intervention, delivered by healthcare practitioner, health or social care worker (child and family health nurses), over the phone, using the health belief model)												
1 (Wen 2022)	randomised trials	serious[7]	no serious inconsistency	no serious indirectness	serious[5]	none	448/770 (58.2%)	146/385 (37.9%)	RR 1.63 (1.4 to 1.89)	239 more per 1000 (from 152 more to 338 more)	LOW	IMPORTANT **IMP. BENEFIT**
Teachers' knowledge score (Knowledge about the Dutch dietary guidelines) (Scale 0-25) (4 months nutrition intervention) (follow-up 5 months; Better indicated by higher values) Components of the intervention (face-to-face intervention, aimed at groups, general intervention, delivered by peer (research staff) and healthy eating and drinking champion (coach of childcare organisation) , at unknown location, no theory mentioned)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
1 (Toussaint 2021)	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	very serious[10]	none	20	18	-	MD 0.33 higher (1.89 lower to 2.55 higher)	VERY LOW	IMPORTANT **NO IMP. DIFF**.
Teachers' attitude score (I feel responsible for healthy nutrition and exercise patterns of children) (4 months nutrition intervention) (follow-up 5 months; measured with: 5-point Likert scale; Better indicated by higher values) Components of the intervention (face-to-face intervention, aimed at groups, general intervention, delivered by peer (research staff) and healthy eating and drinking champion (coach of childcare organisation) , at unknown location, no theory mentioned)												
1 (Toussaint 2021)	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[6]	none	27	24	-	MD 0.26 higher (0.16 lower to 0.68 higher)	VERY LOW	IMPORTANT **NO IMP. DIFF**.
Teachers' practices score (Food-related-Modelling/Encourage-balance-and-variety) (4 months nutrition intervention) (follow-up 5 months; measured with: scale of 1-5; Better indicated by higher values) Components of the intervention (face-to-face intervention, aimed at groups, general intervention, delivered by peer (research staff) and healthy eating and drinking champion (coach of childcare organisation) , at unknown location, no theory mentioned)												
1 (Toussaint 2021)	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	very serious[10]	none	25	24	-	MD 0.03 lower (0.35 lower to 0.29 higher)	VERY LOW	IMPORTANT **NO IMP. DIFF**.
Teachers' confidence score (Level of confidence in supporting children in pursuing a healthy lifestyle) (4 months nutrition intervention) (follow-up 5 months; measured with: scale 1-10; Better indicated by higher values) Components of the intervention (face-to-face intervention, aimed at groups, general intervention, delivered by peer (research staff) and healthy eating and drinking champion (coach of childcare organisation) , at unknown location, no theory mentioned)												
1 (Toussaint 2021)	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[6]	none	32	30	-	MD 0.14 higher (0.36 lower to 0.64 higher)	VERY LOW	IMPORTANT **NO IMP. DIFF**.

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
BMI: body mass index; CI: confidence interval; MD: mean difference; ml/d: millilitres per day; RR: relative risk; SMD: standardised mean difference; SMS: short messaging service
1 See corresponding forest plot in appendix E for studies contributing to this outcome
2 Details of intervention in this comparison: 1 year intervention delivered in two 3-month phases with 6 months interval (Daniels 2014, Daniels 2015, Magarey 2016).
3 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
4 Population is indirect due to inclusion of children aged > 5 years in one study and the proportion is unclear
5 95% CI crosses 1 MID (0.8 or 1.25)
6 95% CI crosses 1 MID (0.5x control group SD, for sweetened milk intake (ml/d) = 119.65, for 'Vegetable intake (g)' = 0.8, for fruit and vegetables acceptance score = 12.5, for Healthy eating habits = 0.05, for BMI (kg/m^2) = 0.57, for Teachers' attitude score = 0.515, for Teachers' confidence score= 0.555)
7 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2
8 Very serious heterogeneity unexplained by subgroup analysis (I^2 = 92%)

9 95% CI crosses 2 MIDs (0.8 and 1.25)
10 95% CI crosses 2 MIDs (0.5x control group SD, for Teachers' knowledge score = 1.575, for Teachers' practices score = 0.23)

Table 6: Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – High socio-economic status strata (Mixed strata for parental education, and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Sugar sweetened beverage (ml/d) (2 year intervention) (follow-up immediately post intervention; Better indicated by lower values) Components of the intervention (face-to-face and printed intervention, aimed at groups, general intervention, delivered by healthy eating and drinking practices champion (parents, community, regional health boards) and early years' professionals (teachers), at nurseries/playgroups/schools, using socio-ecological model)												
1 (De Coen 2012)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	no serious imprecision	none	86	53	-	MD 12.2 higher (9.15 lower to 33.55 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Fruit intake (g/d) – (2 year intervention) (follow-up immediately post intervention; Better indicated by higher values) Components of the intervention (face-to-face and printed intervention, aimed at groups, general intervention, delivered by healthy eating and drinking practices champion (parents, community, regional health boards) and early years' professionals (teachers), at nurseries/playgroups/schools, using socio-ecological model)												
1 (De Coen 2012)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	no serious imprecision	none	86	53	-	MD 0 higher (20.2 lower to 20.2 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake (g/d) (2 year intervention) (follow-up immediately post intervention; Better indicated by lower values) Components of the intervention (face-to-face and printed intervention, aimed at groups, general intervention, delivered by healthy eating and drinking practices champion (parents, community, regional health boards) and early years' professionals (teachers), at nurseries/playgroups/schools, using socio-ecological model)												
1 (De Coen 2012)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	serious[3]	none	86	53	-	MD 25 higher (7.65 lower to 57.65 higher)	VERY LOW	CRITICAL **NO IMP. DIFF**.
BMI z-score (2 year intervention) (follow-up immediately post intervention; Better indicated by lower values) Components of the intervention (face-to-face and printed intervention, aimed at groups, general intervention, delivered by healthy eating and drinking practices champion (parents, community, regional health boards) and early years' professionals (teachers), at nurseries/playgroups/schools, using socio-ecological model)												
1 (De Coen 2012)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	no serious imprecision	none	145	73	-	MD 0.02 higher (0.25 lower to 0.29 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**

CI: confidence interval; MD: mean difference
1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
2 Population is indirect due to inclusion of children aged > 5 years in one study and the proportion is unclear
3 95% CI crosses 1 MID (0.5 x control group SD, for vegetable intake = ±24.65)

Table 7: Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Medium socio-economic status strata (Mixed strata for parental education, and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Sugar sweetened beverage (ml/d) (2 year intervention) (follow-up immediately post intervention; Better indicated by lower values) Components of the intervention (face-to-face and printed intervention, aimed at groups, general intervention, delivered by healthy eating and drinking practices champion (parents, community, regional health boards) and early years' professionals (teachers), at nurseries/playgroups/schools, using socio-ecological model)												
1 (De Coen 2012)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	serious[3]	none	69	31	-	MD 46 lower (87.68 to 4.32 lower)	VERY LOW	CRITICAL **NO IMP. DIFF**.
Fruit intake (g/d) (2 year intervention) (follow-up immediately post intervention; Better indicated by higher values) Components of the intervention (face-to-face and printed intervention, aimed at groups, general intervention, delivered by healthy eating and drinking practices champion (parents, community, regional health boards) and early years' professionals (teachers), at nurseries/playgroups/schools, using socio-ecological model)												
1 (De Coen 2012)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	no serious imprecision	none	69	31	-	MD 1 lower (40.06 lower to 38.06 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake (g/d) (2 year intervention) (follow-up immediately post intervention; Better indicated by higher values) Components of the intervention (face-to-face and printed intervention, aimed at groups, general intervention, delivered by healthy eating and drinking practices champion (parents, community, regional health boards) and early years' professionals (teachers), at nurseries/playgroups/schools, using socio-ecological model)												
1 (De Coen 2012)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	no serious imprecision	none	69	31	-	MD 1.8 higher (21.29 lower to 24.89 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**
BMI z-score (2 year intervention) (follow-up immediately post intervention; Better indicated by lower values) Components of the intervention (face-to-face and printed intervention, aimed at groups, general intervention, delivered by healthy eating and drinking practices champion (parents, community, regional health boards) and early years' professionals (teachers), at nurseries/playgroups/schools, using socio-ecological model)												
1 (De Coen 2012)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	no serious imprecision	none	112	50	-	MD 0.12 higher (0.17 lower to 0.41 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**

CI: confidence interval; MD: mean difference

1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

2 Population is indirect due to inclusion of children aged > 5 years in one study and the proportion is unclear

3 95% CI crosses 1 MID (0.5 x control group SD, for Sugar sweetened beverage = ±56)

Table 8: Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Low socio-economic status/disadvantaged populations strata (Mixed strata for parental education, and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Sugar sweetened beverage (ml/d) (2 year intervention) (follow-up immediately post intervention; Better indicated by lower values) Components of the intervention (face-to-face and printed intervention, aimed at groups, general intervention, delivered by healthy eating and drinking practices champion (parents, community, regional health boards) and early years' professionals (teachers), at nurseries/playgroups/schools, using socio-ecological model)												
1 (De Coen 2012)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	no serious imprecision	none	112	117	-	MD 2.5 higher (20.82 lower to 25.82 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**
No sugar sweetened beverage (soft drink, squash for example ribena or cordial drinks) (9 months intervention) (follow-up 6 months) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Watt 2009)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	25/104 (24%)	33/108 (30.6%)	RR 0.79 (0.5 to 1.23)	64 fewer per 1000 (from 153 fewer to 70 more)	VERY LOW	CRITICAL **NO EV. OF IMP. DIFF.**
Pure unsweetened fruit juice intake regularly (at least once a week) (9 months intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	serious[3]	None	30/55 (54.5%)	16/46 (34.8%)	RR 1.57 (0.99 to 2.49)	198 more per 1000 (from 3 fewer to 518 more)	LOW	CRITICAL **POSS. IMP. BENEFIT.**
Never consumed squash (9 months intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	serious[3]	None	40/55 (72.7%)	19/46 (41.3%)	RR 1.76 (1.2 to 2.58)	314 more per 1000 (from 83 more to 653 more)	LOW	CRITICAL **IMP. BENEFIT**
Fruit intake (g/d) (2 year intervention) (follow up immediately post-intervention; Better indicated by higher values) Components of the intervention (face-to-face and printed intervention, aimed at groups, general intervention, delivered by healthy eating and drinking practices champion (parents, community, regional health boards) and early years' professionals (teachers), at nurseries/playgroups/schools, using socio-ecological model)												
1 (De Coen 2012)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	no serious imprecision	none	112	117	-	MD 18 higher (6.61 lower to 42.61 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake (g/d) (2 year intervention) (follow up immediately post-intervention; Better indicated by higher values) Components of the intervention (face-to-face and printed intervention, aimed at groups, general intervention, delivered by healthy eating and drinking practices champion (parents, community, regional health boards) and early years' professionals (teachers), at nurseries/playgroups/schools, using socio-ecological model)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
1 (De Coen 2012)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	serious[5]	none	112	117	-	MD 18.5 higher (1.79 to 35.21 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake (<6 months to 9 months intervention) (follow-up immediately post intervention or unclear; Better indicated by higher values)												
2[6]	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	729	816	-	SMD 0.01 higher (0.09 lower to 0.11 higher) *	LOW	CRITICAL **NO IMP. DIFF**
Fruit (banana) intake regularly (at least once a week) (9 months intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	serious[3]	None	41/55 (74.5%)	40/45 (88.9%)	RR 0.84 (0.7 to 1.01)	142 fewer per 1000 (from 267 fewer to 9 more)	LOW	CRITICAL **NO IMP. DIFF.**
Fruit (apples) intake regularly (at least once a week) (9 months intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	no serious imprecision	None	53/55 (96.4%)	41/45 (91.1%)	RR 1.06 (0.95 to 1.17)	55 more per 1000 (from 46 fewer to 155 more)	MODERATE	CRITICAL **NO IMP. DIFF.**
Fruit (pears) intake regularly (at least once a week) (9 months intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	very serious[7]	None	36/55 (65.5%)	27/45 (60%)	RR 1.09 (0.8 to 1.48)	54 more per 1000 (from 120 fewer to 288 more)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Fruit (citrus fruits) intake regularly (at least once a week) (9 months intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	serious[3]	None	40/55 (72.7%)	36/45 (80%)	RR 0.91 (0.73 to 1.13)	72 fewer per 1000 (from 216 fewer to 104 more)	LOW	CRITICAL **NO IMP. DIFF.**
Fruit (soft fruits) intake regularly (at least once a week) (9 months intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	serious[3]	none	41/55 (74.5%)	37/45 (82.2%)	RR 0.91 (0.74 to 1.11)	74 fewer per 1000 (from 214 fewer to 90 more)	LOW	CRITICAL **NO IMP. DIFF.**

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Fruit (dried fruits) intake regularly (at least once a week) – (9 months intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	serious[3]	None	26/55 (47.3%)	27/45 (60%)	RR 0.79 (0.55 to 1.14)	126 fewer per 1000 (from 270 fewer to 84 more)	LOW	CRITICAL **NO EV. OF IMP. DIFF.**
Fruit (tinned fruits) intake regularly (at least once a week) (9 months intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	very serious[7]	None	5/55 (9.1%)	7/45 (15.6%)	RR 0.58 (0.2 to 1.72)	65 fewer per 1000 (from 124 fewer to 112 more)	VERY LOW	CRITICAL **NO EV. OF IMP. DIFF.**
Vegetable (carrots) intake regularly (at least once a week) (9 months intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	no serious imprecision	None	49/54 (90.7%)	41/46 (89.1%)	RR 1.02 (0.89 to 1.16)	18 more per 1000 (from 98 fewer to 143 more)	MODERATE	CRITICAL **NO IMP. DIFF.**
Vegetable (other root vegetables) intake regularly (at least once a week) (9 months intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	very serious[7]	None	18/55 (32.7%)	17/46 (37%)	RR 0.89 (0.52 to 1.51)	41 fewer per 1000 (from 177 fewer to 188 more)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Vegetable (leafy green vegetables) intake regularly (at least once a week) (9 months intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	no serious imprecision	None	48/55 (87.3%)	40/46 (87%)	RR 1 (0.86 to 1.17)	0 fewer per 1000 (from 122 fewer to 148 more)	MODERATE	CRITICAL **NO IMP. DIFF.**
Vegetable (peas) intake regularly (at least once a week) (9 months intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	serious[3]	None	29/55 (52.7%)	31/45 (68.9%)	RR 0.77 (0.56 to 1.05)	158 fewer per 1000 (from 303 fewer to 34 more)	LOW	CRITICAL **POSS. IMP. DIFF.**
Vegetable (other green vegetables) intake regularly (at least once a week) (9 months intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Interventions using information provision and/or education to enhance healthy eating and drinking practices**	**Status quo (including no treatment)**	**Relative (95% CI)**	**Absolute**		
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	no serious imprecision	None	46/55 (83.6%)	37/46 (80.4%)	RR 1.04 (0.86 to 1.25)	32 more per 1000 (from 113 fewer to 201 more)	MODERATE	CRITICAL **NO IMP. DIFF.**
Vegetable (baked beans) intake regularly (at least once a week) (9 months intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	no serious imprecision	None	15/55 (27.3%)	26/45 (57.8%)	RR 0.47 (0.29 to 0.78)	306 fewer per 1000 (from 127 fewer to 410 fewer)	MODERATE	CRITICAL **IMP. DIFF.**
Vegetable (other beans and pulses) intake regularly (at least once a week) (9 months intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	very serious[7]	none	18/55 (32.7%)	16/46 (34.8%)	RR 0.94 (0.54 to 1.63)	21 fewer per 1000 (from 160 fewer to 219 more)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Vegetable (tomatoes) intake regularly (at least once a week) (9 months intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	no serious imprecision	None	46/55 (83.6%)	37/46 (80.4%)	RR 1.04 (0.86 to 1.25)	32 more per 1000 (from 113 fewer to 201 more)	MODERATE	CRITICAL **NO IMP. DIFF.**
Vegetable (peppers) intake regularly (at least once a week) (9 months intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	very serious[7]	None	23/55 (41.8%)	20/46 (43.5%)	RR 0.96 (0.61 to 1.51)	17 fewer per 1000 (from 170 fewer to 222 more)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Fat (g) (infant 18 months old) (9 months intervention) (follow-up 6 months; Better indicated by lower values) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Watt 2009)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	None	104	108	-	MD 0.9 lower (4.59 lower to 2.79 higher)	LOW	CRITICAL **NO IMP. DIFF.**
Total sugars intake (g) (9 months intervention) (follow-up 6 months; Better indicated by lower values) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Watt 2009)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	104	108	-	MD 4.8 lower (17.31 lower to 7.71 higher)	LOW	CRITICAL **NO IMP. DIFF.**

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Iron intake (mg) (9 months intervention) (follow-up 6 months; Better indicated by higher values) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Watt 2009)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	115	123	-	MD 1.1 lower (2.18 to 0.02 lower)	LOW	CRITICAL **NO IMP. DIFF.**
BMI z-score (2 year intervention) (follow-up immediately post intervention; Better indicated by lower values) Components of the intervention (face-to-face and printed intervention, aimed at groups, general intervention, delivered by healthy eating and drinking practices champion (parents, community, regional health boards) and early years' professionals (teachers), at nurseries/playgroups/schools, using socio-ecological model)												
1 (De Coen 2012)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	no serious imprecision	none	195	176	-	MD 0.16 lower (0.36 lower to 0.04 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Length (cm) (9 months intervention) (follow-up 6 months; Better indicated by lower values) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Watt 2009)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	103	108	-	MD 0.2 higher (0.72 lower to 1.12 higher)	LOW	CRITICAL **NO IMP. DIFF.**
Children with decayed, missing and filled deciduous teeth (9 months intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	very serious[7]	none	7/44 (15.9%)	5/41 (12.2%)	RR 1.3 (0.45 to 3.79)	37 more per 1000 (from 67 fewer to 340 more)	VERY LOW	CRITICAL **NO EV. OF IMP. DIFF.**
No longer using a bottle at 18 months of age (9 months intervention) (follow-up 6 months) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Watt 2009)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	43/104 (41.3%)	26/108 (24.1%)	RR 1.72 (1.14 to 2.58)	173 more per 1000 (from 34 more to 380 more)	VERY LOW	IMPORTANT **IMP. BENEFIT**
Usually going to bed with baby bottle (9 month intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	serious[3]	none	5/55 (9.1%)	8/46 (17.4%)	RR 0.52 (0.18 to 1.49)	83 fewer per 1000 (from 143 fewer to 85 more)	LOW	IMPORTANT **NO EV. OF IMP. DIFF.**
Still using baby bottle at age 4 years (9 month intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	serious[3]	none	7/55 (12.7%)	9/46 (19.6%)	RR 0.65 (0.26 to 1.61)	68 fewer per 1000 (from 145 fewer to 119 more)	LOW	IMPORTANT **NO EV. OF IMP. DIFF.**
Usually using a feeder beaker with sprout (9 month intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	very serious[7]	none	1/55 (1.8%)	5/46 (10.9%)	RR 0.17 (0.02 to 1.38)	90 fewer per 1000 (from 107 fewer to 41 more)	VERY LOW	IMPORTANT **NO EV. OF IMP. DIFF.**
5 or 6 correct answers out of 6 knowledge questions (Question not specified in study. Most questions were from published studies and surveys such as the UK National Diet and Nutritional survey (NDNS) for children 1.5 to 4.5 years) (9 month intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	serious[3]	none	32/55 (58.2%)	16/46 (34.8%)	RR 1.67 (1.06 to 2.64)	233 more per 1000 (from 21 more to 570 more)	LOW	IMPORTANT **IMP. BENEFIT**
Mothers' knowledge that bottle feeding should be discouraged from 12 months of age (9 months intervention) (follow-up 6 months) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Watt 2009)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	74/104 (71.2%)	62/108 (57.4%)	RR 1.24 (1.01 to 1.52)	138 more per 1000 (from 6 more to 299 more)	VERY LOW	IMPORTANT **NO IMP. DIFF.**
Mother confident on health professionals recommendations on child feeding – 6 months follow-up (9 months intervention) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Watt 2009)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	99/104 (95.2%)	95/108 (88%)	RR 1.08 (1 to 1.17)	70 more per 1000 (from 0 more to 150 more)	LOW	IMPORTANT **NO IMP. DIFF.**
Feels 'very confident' to know what foods are recommended by health professionals (9 month intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	very serious[7]	none	21/55 (38.2%)	17/46 (37%)	RR 1.03 (0.62 to 1.71)	11 more per 1000 (from 140 fewer to 262 more)	VERY LOW	IMPORTANT **NO IMP. DIFF.**

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Feels 'very confident' to know what foods are good for child (9 month intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	serious[3]	none	38/55 (69.1%)	20/46 (43.5%)	RR 1.59 (1.09 to 2.31)	257 more per 1000 (from 39 more to 570 more)	LOW	IMPORTANT **IMP. BENEFIT**
Feels 'very confident' in being able to provide these foods (9 month intervention) (follow-up 4 years) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general intervention, delivered by healthy eating and drinking practices champions (volunteers), during home visits, using social support theoretical model)												
1 (Scheiwe 2010)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	serious[3]	none	42/55 (76.4%)	31/46 (67.4%)	RR 1.13 (0.88 to 1.45)	88 more per 1000 (from 81 fewer to 303 more)	LOW	IMPORTANT **NO IMP. DIFF.**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; MD: mean difference; ml/d: millilitres per day; NDSD: UK National Diet and Nutritional survey; RR: relative risk; SMD: standardised mean difference
1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
2 Population is indirect due to inclusion of children aged > 5 years in one study and the proportion is unclear
3 95% CI crosses 1 MID (0.8 or 1.25)
4 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2
5 95% CI crosses 1 MID (0.5 x control group SD, for vegetable intake (g/d) = ±32.05)
6 Haire-Joshu 2008, Watt 2009
7 95% CI crosses 2 MIDs (0.8 and 1.25).

The following GRADE tables (Table 9 to Table 20) are a sensitivity analysis for Comparison 1 with intervention components: mode of delivery, when the intervention is delivered, interventions aimed at individuals or groups, individualised or targeted interventions, who delivers the intervention, where the intervention is delivered. Sensitivity analyses were conducted when 2 or more studies of the same study design reported on the same outcome.

Table 9: Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education) – Component 1: Mode of delivery

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Sugar sweetened beverage (ml/d) – Face-to-face interventions (1 year intervention) (follow-up 42 months; Better indicated by lower values)												
1 (Magarey 2016)[1]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	213	211	-	MD 0.10 lower (1.49 lower to 1.29 higher)	LOW	CRITICAL **NO IMP. DIFF.**
Sugar sweetened beverage (ml/d) – Face-to-face and printed interventions (1 to 2 years intervention) (follow-up immediately post-intervention; Better indicated by lower values)												
2[3]	randomised trials	very serious[2]	no serious inconsistency	serious[4]	no serious imprecision	none	306	222	-	MD 6.71 lower (20.05 lower to 6.63 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Sugar sweetened beverage intake (>/= daily) – Face-to-face interventions (1 year intervention) (follow-up 6 months)												
1 (Daniels 2014)[1]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	serious[5]	none	83/249 (33.3%)	95/266 (35.7%)	RR 0.93 (0.74 to 1.18)	25 fewer per 1000 (from 93 fewer to 64 more)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Sugar sweetened beverage intake (>/= daily) – Face-to-face and printed interventions (1 year intervention) (follow-up immediately post-intervention)												
1 (Kobel 2019)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	very serious[6]	none	7/172 (4.1%)	8/130 (6.2%)	RR 0.66 (0.25 to 1.78)	21 fewer per 1000 (from 46 fewer to 48 more)	VERY LOW	CRITICAL **NO EV. OF IMP. DIFF.**
No sugar sweetened beverage (soft drink, squash for example Ribena or cordial drinks) –Audio (telephone) or textual interventions (2 year intervention) (follow-up immediately post-intervention)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Interventions using information provision and/or education to enhance healthy eating and drinking practices**	**Status quo (including no treatment)**	**Relative (95% CI)**	**Absolute**		
1 (Wen 2022)	randomised trials	serious[7]	no serious inconsistency	no serious indirectness	no serious imprecision	none	685/770 (89.0%)	338/385 (87.8%)	RR 1.01 (0.97 to 1.06)	9 more per 1000 (from 26 fewer to 53 more)	MODERATE	CRITICAL **NO IMP. DIFF**.
Fruit and vegetable intake – Face-to-face interventions (12 months intervention) (follow-up immediately post-intervention; Better indicated by higher values)												
1 (Verbestel 2014)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	58	36	-	SMD 0.06 lower (0.36 lower to 0.49 higher)*	LOW	CRITICAL **NO IMP. DIFF**.
Fruit and vegetable intake - Face-to-face and printed interventions (Better indicated by higher values) (1 year intervention) (follow-up immediately post-intervention)												
1 (Kobel 2019)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	318	240	-	SMD 0.06 lower (0.23 lower to 0.12 higher)*	LOW	CRITICAL **NO IMP. DIFF**.
Fruit and vegetable intake – Face-to-face, printed and electronic (online) interventions (6 months intervention) (follow-up 2 – 4 months; Better indicated by higher values)												
1 (Kristiansen 2019)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	137	160	-	SMD 0.08 higher (0.15 lower to 0.31 higher)*	LOW	CRITICAL **NO IMP. DIFF**.
Fruit and vegetable intake – Printed interventions (2 years intervention) (follow-up immediately post-intervention; Better indicated by higher values)												
1 (De Coen 2012)	randomised trials	very serious[2]	no serious inconsistency	serious[8]	no serious imprecision	none	396	298	-	SMD 0.12 higher (0.13 lower to 0.38 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake (1 year intervention) – Face-to-face interventions (follow-up 6 months; Better indicated by higher values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
1 (Daniels 2014)[1]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	266	249	-	SMD 0.01 higher (0.16 lower to 0.18 higher)*	LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake - Face-to-face and printed interventions (10 weeks intervention) (follow-up 24 weeks; Better indicated by higher values)												
1 (Nekitsing 2019)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	47	16	-	SMD 1.24 higher (0.58 to 1.9 higher)*	LOW	CRITICAL **IMP. BENEFIT**
Vegetable intake (g/kg body weight) – Face-to-face interventions (1 year intervention) (follow-up 42 months; Better indicated by higher values)												
1 (Magarey 2016)[1]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	213	211	-	MD 0.70 higher (0.74 lower to 2.14 higher)	LOW	CRITICAL **NO IMP. DIFF**.
Vegetable intake – Face-to-face and printed interventions (14 days to 2 year intervention) (follow-up immediately post-intervention; Better indicated by higher values)												
3[9]	randomised trials	very serious[2]	no serious inconsistency	serious[4]	no serious imprecision	none	350	263	-	SMD 0.09 higher (0.07 lower to 0.25 higher)	VERY LOW	CRITICAL **NO IMP. DIFF**.
Vegetable intake – Printed and visual (pictures) interventions (2 weeks intervention) (follow-up immediately post intervention; Better indicated by higher values)												
1 (Heath 2014)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	Serious[10]	none	43	36	-	MD 0.50 higher (0.21 lower to 1.21 higher)	VERY LOW	CRITICAL **NO IMP. DIFF**.
BMI z-score – Face-to-face interventions (4 months – 1 year intervention) (follow-up 5 to 42 months; Better indicated by lower values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Interventions using information provision and/or education to enhance healthy eating and drinking practices**	**Status quo (including no treatment)**	**Relative (95% CI)**	**Absolute**		
2[1, 11]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	277	270	-	MD 0.05 lower (0.2 lower to 0.1 higher)	LOW	CRITICAL **NO IMP. DIFF**.
BMI z-score – Face-to-face and printed interventions (12 months to 2 years intervention) (follow-up immediately post intervention; Better indicated by lower values)												
2[3]	randomised trials	very serious[2]	no serious inconsistency	serious[4]	no serious imprecision	none	506	328	-	MD 0.03 lower (0.16 lower to 0.1 higher)	VERY LOW	CRITICAL **NO IMP. DIFF**.
BMI z-score – Audio(telephone) or textual (SMS) interventions (2 years intervention) (follow-up immediately post-intervention; Better indicated by lower values)												
1 (Wen 2022)	randomised trials	serious[7]	no serious inconsistency	no serious indirectness	no serious imprecision	none	770	385	-	MD 0.01 lower (0.19 lower to 0.17 higher)	MODERATE	CRITICAL **NO IMP. DIFF**.

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; MD: mean difference; ml/d: millilitres per day; RR: relative risk; SMD: standardised mean difference
1 Details of intervention in this comparison: 1 year intervention delivered in two 3-month phases with 6 months interval (Daniels 2014, Daniels 2015, Magarey 2016)
2 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
3 De Coen 2012, Verbestel 2014
4 Population is indirect due to inclusion of children aged > 5 years in one study and the proportion is unclear
5 95% CI crosses 1 MID (0.8 and 1.25)
6 95% CI crosses 2 MIDs (0.8 and 1.25)
7 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2
8 Population is indirect due to inclusion of children aged > 5 years and the proportion is unclear
9 De Coen 2012, Verbestel 2014, Wardle 2003
10 95% CI crosses 1 MID (0.5 x control group SD, for Vegetable intake – Printed and visual (pictures) interventions = ±0.8 (baseline SD not reported, follow-up SD used)
11 Daniels 2015, Toussaint 2021

Table 10: Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education) – Component 2: Interventions aimed at individuals or groups

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Sugar sweetened beverage (ml/d) (12 months intervention) – interventions aimed at individuals (follow-up immediately post-intervention; Better indicated by lower values)												
1 (Verbestel 2014)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	38	21	-	MD 11.51 lower (35.26 lower to 12.24 higher)	LOW	CRITICAL **NO IMP. DIFF.**
Sugar sweetened beverage (ml/d) (1 to 2 years intervention) – Interventions aimed at groups (follow-up immediately post-intervention to 42 months; Better indicated by lower values)												
2[3,4]	randomised trials	very serious[5]	no serious inconsistency	serious[6]	no serious imprecision	none	481	412	-	MD 0.13 lower (1.51 lower to 1.25 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Sugar sweetened beverage intake (>/= daily) (1 year intervention) – Interventions aimed at groups (follow-up immediately post-intervention to 6 months)												
2[4,7]	randomised trials	very serious[5]	no serious inconsistency	no serious indirectness	no serious imprecision	none	90/421 (21.4%)	103/396 (26%)	RR 0.91 (0.72 to 1.15)	23 fewer per 1000 (from 73 fewer to 39 more)	LOW	CRITICAL **NO IMP. DIFF.**
No sugar sweetened beverage (soft drink, squash for example Ribena or cordial drinks) (2 year intervention) – Interventions aimed at individuals (follow-up immediately post-intervention)												
1 (Wen 2022)	randomised trials	very serious[5]	no serious inconsistency	no serious indirectness	Serious[8]	none	685/770 (89.0%)	338/385 (87.9%)	RR 1.01 (0.97 to 1.06)	9 more per 1000 (from 26 fewer to 53 more)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake (12 months intervention) – interventions aimed at individuals (follow up immediately post-intervention; Better indicated by higher values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
1 (Verbestel 2014)	randomised trials	very serious[5]	no serious inconsistency	no serious indirectness	no serious imprecision	none	58	36	-	SMD 0.06 higher (0.36 lower to 0.49 higher)*	LOW	CRITICAL **NO IMP. DIFF**.
Fruit and vegetable intake (6 months to 2 years intervention) – interventions aimed at groups (follow up immediately post-intervention to 4 months; Better indicated by higher values)												
3[9]	randomised trials	very serious[5]	no serious inconsistency	serious[6]	no serious imprecision	none	851	698	-	SMD 0.03 higher (0.1 lower to 0.15 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF**.
Vegetable intake (10 weeks to 1 year intervention) – interventions aimed at groups (follow up 24 weeks to 6 months; Better indicated by higher values)												
2[4, 10]	randomised trials	very serious[5]	very serious[11]	no serious indirectness	very serious[12]	none	313	265	-	SMD 0.58 higher (0.61 lower to 1.78 higher)*	VERY LOW	CRITICAL **NO EV. OF IMP. DIFF.**
Vegetable intake (14 days intervention) – interventions aimed at individuals (follow-up immediately post-intervention; Better indicated by higher values)												
1 (Wardle 2003)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	48	44	-	MD 0.40 lower (5.12 lower to 4.32 higher)	MODERATE	CRITICAL **NO IMP. DIFF.**
Vegetable intake (1 to 2 years intervention) – interventions aimed at groups (follow-up immediately post intervention to 42 months; Better indicated by higher values)												
2[3,4]	randomised trials	very serious[5]	no serious inconsistency	serious[6]	no serious imprecision	none	528	482	-	SMD 0.07 higher (0.06 lower to 0.19 higher)	VERY LOW	CRITICAL **NO IMP. DIFF**.
BMI z-score – (intervention 12 months to 2 years) – interventions aimed at individuals (follow up immediately post-intervention; Better indicated by lower values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Interventions using information provision and/or education to enhance healthy eating and drinking practices**	**Status quo (including no treatment)**	**Relative (95% CI)**	**Absolute**		
2[13]	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	824	414	-	MD 0 higher (0.16 lower to 0.17 higher)	MODERATE	CRITICAL **NO IMP. DIFF.**
BMI z-score – (4 months to 2 years intervention) – interventions aimed at groups (follow up immediately post-intervention to 42 months; Better indicated by lower values)												
3[4, 14]	randomised trials	very serious[5]	no serious inconsistency	serious[6]	no serious imprecision	none	729	569	-	MD 0.05 lower (0.15 lower to 0.06 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; MD: mean difference; ml/d: millilitres per day; RR: relative risk; SMD: standardised mean difference
1 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2
2 95% CI crosses 1 MID (0.5 x control group SD, for Sugar sweetened beverage (ml/d) – interventions aimed at individuals = ±23.05)
3 De Coen 2012, Magarey 2016
4 Details of intervention in this comparison: 1 year intervention delivered in two 3-month phases with 6 months interval (Daniels 2014, Daniels 2015, Magarey 2016)
5 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
6 Population is indirect due to inclusion of children aged > 5 years in one study and the proportion is unclear
7 Daniels 2014, Kobel 2019
8 95% CI crosses 1 MID (0.8 and 1.25)
9 De Coen 2012, Kobel 2019, Kristiansen 2019
10 Daniels 2014, Nekitsing 2019
11 Very serious heterogeneity I2 = 92%
12 95% CI crosses 2 MIDs (± 0.5 for SMD estimates reported in Hodder 2020)
13 Verbestel 2014, Wen 2022
14 Daniels 2015, De Coen 2012, Toussaint 2021

Table 11: Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education) – Component 3: Individualised/tailored interventions based on needs or general interventions, aimed at the population of interest

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Sugar sweetened beverage (ml/d) (1 year intervention) – Individualised/tailored interventions (follow up immediately post-intervention; Better indicated by lower values)												
1 (Verbestel 2014)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	38	21	-	MD 11.51 lower (35.26 lower to 12.24 higher)	LOW	CRITICAL **NO IMP. DIFF.**
Sugar sweetened beverage (ml/d) – (1 to 2 years intervention) – General interventions (follow up immediately post intervention to 42 months; Better indicated by lower values)												
2[3, 4]	randomised trials	very serious[5]	no serious inconsistency	serious[6]	no serious imprecision	none	481	412	-	MD 0.13 lower (1.51 lower to 1.25 higher)	VERY LOW	CRITICAL **NO IMP. DIFF**.
Sugar sweetened beverage intake (≥ daily) – (1 year intervention) – General interventions (follow up immediately post-intervention to 6 months)												
2[4, 7]	randomised trials	very serious[5]	no serious inconsistency	no serious indirectness	no serious imprecision	none	90/421 (21.4%)	103/396 (26%)	RR 0.91 (0.72 to 1.15)	23 fewer per 1000 (from 73 fewer to 39 more)	LOW	CRITICAL **NO IMP. DIFF**.
No sugar sweetened beverage (soft drink, squash for example Ribena or cordial drinks) (2 years intervention) – general interventions (follow up immediately post-intervention)												
1 (Wen 2022)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	685/770 (89%)	338/385 (87.8%)	RR 1.01 (0.97 to 1.06)	9 more per 1000 (from 26	MODERATE	CRITICAL

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
										fewer to 53 more)		**NO IMP. DIFF.**
Fruit and vegetable intake (6 months to 2 years intervention) – general interventions (follow up immediately post-intervention to 4 months; Better indicated by higher values)												
3[8]	randomised trials	very serious[5]	no serious inconsistency	serious[6]	no serious imprecision	none	851	698	-	SMD 0.03 higher (0.10 lower to 0.15 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake (12 months intervention) – individualised/tailored and general interventions (follow up immediately post intervention; Better indicated by higher values)												
1 (Verbestel 2014)	randomised trials	very serious[5]	no serious inconsistency	no serious indirectness	no serious imprecision	none	58	36	-	SMD 0.06 higher (0.36 lower to 0.49 higher)*	LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake (10 weeks to 1 year intervention)- general interventions (follow up 24 weeks to 6 months; Better indicated by higher values)												
2[4, 9]	randomised trials	very serious[5]	very serious[10]	no serious indirectness	very serious[11]	none	313	265	-	SMD 0.58 higher (0.61 lower to 1.78 higher)*	VERY LOW	CRITICAL **NO EV. OF IMP. DIFF.**
Vegetable intake (14 days to 2 years intervention) – general interventions (follow up immediately post-intervention to 42 months; Better indicated by higher values)												
3[4, 12]	randomised trials	very serious[5]	no serious inconsistency	serious[6]	no serious imprecision	none	576	526	-	SMD 0.06 higher (0.06 lower to 0.18 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**
BMI z-score (12 months intervention) – Individualised/tailored and general interventions (follow up immediately post-intervention; Better indicated by lower values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Interventions using information provision and/or education to enhance healthy eating and drinking practices**	**Status quo (including no treatment)**	**Relative (95% CI)**	**Absolute**		
1 (Verbestel 2014)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	54	29	-	MD 0.08 higher (0.35 lower to 0.51 higher)	LOW	CRITICAL **NO IMP. DIFF**.
BMI z-score (4 months – 2 years intervention) – general intervention (follow-up immediately post-intervention to 42 months Better indicated by lower values)												
4[4, 13]	randomised trials	very serious[5]	no serious inconsistency	serious[6]	no serious imprecision	none	1499	954	-	MD 0.04 lower (0.12 lower to 0.05 higher)	VERY LOW	CRITICAL **NO IMP. DIFF**.

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; MD: mean difference; ml/d: millilitres per day; RR: relative risk; SMD: standardised mean difference
1 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2
2 95% CI crosses 1 MID (0.5 x control group SD, for Sugar sweetened beverage (ml/d) – Individualised/tailored interventions = ±23.05)
3 De Coen 2012, Magarey 2016
4 Details of intervention in this comparison: 1 year intervention delivered in two 3-month phases with 6 months interval (Daniels 2014, Daniels 2015, Magarey 2016)
5 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
6 Population is indirect due to inclusion of children aged > 5 years in one study and the proportion is unclear
7 Daniels 2014, Kobel 2019
8 De Coen 2012, Kobel 2019, Kristiansen 2019
9 Daniels 2014, Nekitsing 2019
10 Very serious heterogeneity unexplained by subgroup analysis (I^2 = 92%)
11 95% CI crosses 2 MIDs (± 0.5 for SMD estimates reported in Hodder 2020)
12 De Coen 2012, Magarey 2016, Wardle 2003
13 Daniels 2015, De Coen 2012, Toussaint 2021, Wen 2022

Table 12: Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education) – Component 4: Who delivers the intervention?

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Sugar sweetened beverage (ml/d) (1 year intervention) – Healthcare practitioner, health or social care worker (dieticians, psychologists) (follow up 42 months; Better indicated by lower values)												
1 (Magarey 2016)[1]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	213	211	-	MD 0.1 lower (1.49 lower to 1.29 higher)	LOW	CRITICAL **NO IMP. DIFF.**
Sugar sweetened beverage (ml/d) (12 months intervention) – Peer (researchers) (follow up immediately post-intervention; Better indicated by lower values)												
1 (Verbestel 2014)	randomised trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	38	21	-	MD 11.51 lower (35.26 lower to 12.24 higher)	LOW	CRITICAL **NO IMP. DIFF.**
Sugar sweetened beverage (ml/d) (2 years intervention) – Healthy eating and drinking practices 'champion' (parents, community, regional health boards) and Early years professionals (teachers) (follow up immediately post-intervention; Better indicated by lower values)												
1 (De Coen 2012)	randomised trials	very serious[2]	no serious inconsistency	serious[5]	no serious imprecision	none	268	201	-	MD 4.5 lower (20.62 lower to 11.62 higher)	VERY LOW	CRITICAL **NO EV. OF IMP. DIFF.**
Sugar sweetened beverage intake (≥ daily) (1 year intervention) – Healthcare practitioner, health or social care worker (dieticians, psychologists) (follow up 6 months)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Interventions using information provision and/or education to enhance healthy eating and drinking practices**	**Status quo (including no treatment)**	**Relative (95% CI)**	**Absolute**		
1 (Daniels 2014)[1]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	serious[6]	none	83/249 (33.3%)	95/266 (35.7%)	RR 0.93 (0.74 to 1.18)	25 fewer per 1000 (from 93 fewer to 64 more)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Sugar sweetened beverage intake (≥daily) (1 year intervention) – Early years professionals (teachers) (follow up immediately post-intervention)												
1 (Kobel 2019)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	very serious[7]	none	7/172 (4.1%)	8/130 (6.2%)	RR 0.66 (0.25 to 1.78)	21 fewer per 1000 (from 46 fewer to 48 more)	VERY LOW	CRITICAL **NO IMP. DIFF.**
No sugar sweetened beverage (soft drink, squash for example Ribena or cordial drinks) (2 years intervention) – Healthcare practitioner, health or social worker (child and family health nurses) (follow up immediately post-intervention)												
1 (Wen 2022)	randomised trials	serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	685/770 (89%)	338/385 (87.8%)	RR 1.01 (0.97 to 1.06)	9 more per 1000 (from 26 fewer to 53 more)	MODERATE	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake (12 months intervention) – Peer (researchers) (Better indicated by higher values) (follow up immediately post-intervention)												
1 (Verbestel 2014)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	58	36	-	SMD 0.06 higher (0.36 lower to 0.49 higher)*	LOW	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake (6 months intervention) – Peer (Researchers), healthy eating and drinking champion (cook) and early years professional (kindergarten staff) ((follow up 2 to 4 months; Better indicated by higher values)												
1 (Kristiansen 2019)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	137	160	-	SMD 0.08 higher (0.15 lower to 0.31 higher)*	LOW	CRITICAL **NO IMP. DIFF.**

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Fruit and vegetable intake (2 year intervention) – Healthy eating and drinking champions (parents, community and regional health boards) and early years professionals (teachers) (follow up immediately post-intervention; Better indicated by higher values)												
1 (De Coen 2012)	randomised trials	very serious[2]	no serious inconsistency	serious[5]	no serious imprecision	none	396	298	-	SMD 0.12 higher (0.13 lower to 0.38 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake (1 year intervention) – Early years professionals (teachers) follow up immediately post-intervention; Better indicated by higher values)												
1 (Kobel 2019)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	318	240	-	SMD 0.06 lower (0.23 lower to 0.12 higher)*	LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake (1 year intervention) – Healthcare practitioner, health or social care worker (dieticians and psychologists) (follow up 6 months; Better indicated by higher values)												
1 (Daniels 2014)[1]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	266	249	-	SMD 0.01 higher (0.16 lower to 0.18 higher)*	LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake (10 weeks intervention) – Early years professionals (Preschool staff) (follow up 24 weeks; Better indicated by higher values)												
1 (Nekitsing 2019)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	47	16	-	SMD 1.24 higher (0.58 to 1.90 higher)*	LOW	CRITICAL **IMP. BENEFIT**
Vegetable intake (2 years intervention) – Healthy eating and drinking champions (parents, community and regional health boards) and early years professionals (teachers) (follow up immediately post-intervention; Better indicated by higher values)												
1 (De Coen 2012)	randomised trials	very serious[2]	no serious inconsistency	serious[5]	no serious imprecision	none	268	201	-	MD 7.90 higher (3.03	VERY LOW	CRITICAL

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
										lower to 18.83 higher)		**NO IMP. DIFF.**
Vegetable intake (1 year intervention) Healthcare practitioner, health or social care worker (dieticians and psychologists)) (follow up 42 months; Better indicated by higher values)												
1 (Magarey 2016)[1]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	260	281	-	MD 0.10 higher (1.15 lower to 1.35 higher)	LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake (14 days intervention) – Healthy eating and drinking champions (parents) (follow up immediately post-intervention; Better indicated by higher values)												
1 (Wardle 2003)	randomised trials	serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	48	44	-	MD 0.40 lower (5.12 lower to 4.32 higher)	MODERATE	CRITICAL **NO IMP. DIFF.**
BMI z-score (1 year intervention) – Healthcare practitioner, health or social care worker (dieticians and psychologists) (follow up 42 months; Better indicated by lower values)												
1 (Daniels 2015)[1]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	213	211	-	MD 0.07 lower (0.24 lower to 0.1 higher)	LOW	CRITICAL **NO IMP. DIFF.**
BMI z-score (2 years intervention) – Healthcare practitioner, health or social care worker (Child and Family Health Nurses) (follow up immediately post-intervention; Better indicated by lower values)												
1 (Wen 2022)	randomised trials	serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	770	385	-	MD 0.01 lower (0.19 lower to 0.17 higher)	MODERATE	CRITICAL **NO IMP. DIFF.**
BMI z-score (12 months intervention) – Peer (researchers) (Better indicated by lower values) (follow up immediately post-intervention)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Interventions using information provision and/or education to enhance healthy eating and drinking practices**	**Status quo (including no treatment)**	**Relative (95% CI)**	**Absolute**		
1 (Verbestel 2014)	randomised trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	54	29	-	MD 0.08 higher (0.35 lower to 0.51 higher)	LOW	CRITICAL **NO IMP. DIFF.**
BMI z-score (4 months intervention) – Peer (research staff) and healthy eating and drinking practices 'champion' (coach of childcare organisation) (follow up 5 months; Better indicated by lower values)												
1 (Toussaint 2021)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	64	59	-	MD 0.03 higher (0.32 lower to 0.38 higher)	LOW	CRITICAL **NO IMP. DIFF.**
BMI z-score –(2 years intervention) – Healthy eating and drinking practices 'champion' (parents, community, regional health boards) and Early years professionals (teachers) (follow up immediately post-intervention; Better indicated by lower values)												
1 (De Coen 2012)	randomised trials	very serious[2]	no serious inconsistency	serious[5]	no serious imprecision	none	452	299	-	MD 0.04 lower (0.18 lower to 0.1 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; MD: mean difference; RR: relative risk; SMD: standardised mean difference
1 Details of intervention in this comparison: 1 year intervention delivered in two 3-month phases with 6 months interval (Daniels 2014, Daniels 2015, Magarey 2016)
2 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
3 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2
4 95% CI crosses 1 MID (0.5 x control group SD, for Sugar sweetened beverage (ml/d) – Peer (researchers) = ±23.05; for BMI z-score – Peer (researchers) = ±0.46)
5 Population is indirect due to inclusion of children aged >5 years and the proportion is unclear
6 95% CI crosses 1 MID (0.8 and 1.25)
7 95% CI crosses 2 MIDs (0.8 and 1.25)

Table 13: Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education) – Component 5: Where the intervention is delivered

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Sugar sweetened beverage (ml/d) (12 months to 2 years intervention) – Nurseries/playgroups/schools (follow up immediately post-intervention; Better indicated by lower values)												
2[1]	randomised trials	very serious[2]	no serious inconsistency	serious[3]	no serious imprecision	none	306	222	-	MD 6.71 lower (20.05 lower to 6.63 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Sugar sweetened beverage (ml/d) – (1 year intervention) – Healthcare settings (Child health clinics) (follow up 42 months post-intervention Better indicated by lower values)												
1 (Magarey 2016)[4]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	213	211	-	MD 0.1 lower (1.49 lower to 1.29 higher)	LOW	CRITICAL **NO IMP. DIFF.**
Sugar sweetened beverage intake (≥ daily) (1 year*intervention) – Healthcare settings (Child health clinics) (follow up 6 months)												
1 (Daniels 2014)[4]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	serious[5]	none	83/249 (33.3%)	95/266 (35.7%)	RR 0.93 (0.74 to 1.18)	25 fewer per 1000 (from 93 fewer to 64 more)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Sugar sweetened beverage intake (≥ daily) – (1 year intervention) – Nurseries/playgroups/schools (follow up immediately post-intervention)												
1 (Kobel 2019)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	very serious[6]	none	7/172 (4.1%)	8/130 (6.2%)	RR 0.66 (0.25 to 1.78)	21 fewer per 1000 (from 46 fewer to 48 more)	VERY LOW	CRITICAL **NO EV. OF IMP. DIFF.**
No sugar sweetened beverage (soft drink, squash for example Ribena or cordial drinks) (2 year intervention) – Other (at parents' convenience – telephone/SMS) – follow up immediately post intervention												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Interventions using information provision and/or education to enhance healthy eating and drinking practices**	**Status quo (including no treatment)**	**Relative (95% CI)**	**Absolute**		
1 (Wen 2022)	randomised trials	serious[7]	no serious inconsistency	no serious indirectness	no serious imprecision	none	685/770 (89%)	338/385 (87.8%)	RR 1.01 (0.97 to 1.06)	9 more per 1000 (from 26 fewer to 53 more)	MODERATE	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake (1 to 2 years intervention) – Nurseries/playgroups/schools (follow up immediately post-intervention; Better indicated by higher values)												
3[8]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	772	574	-	SMD 0.01 higher (0.13 lower to 0.15 higher)*	LOW	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake (6 months intervention) – Other (home and kindergarten) (follow-up 2 to 4 months; Better indicated by higher values)												
1 (Kristiansen 2019)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	137	160	-	SMD 0.08 higher (0.15 lower to 0.31 higher)*	LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake (1 year intervention) – Healthcare setting (child health clinics) (follow up 6 months; Better indicated by higher values)												
1 (Daniels 2014)[4]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	266	249	-	SMD 0.01 higher (0.16 lower to 0.18 higher)*	LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake (10 weeks intervention) – Nurseries/playgroups/schools (follow up 24 weeks; Better indicated by higher values)												
1 (Nekitsing 2019)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	7	16	-	SMD 1.24 higher (0.58 to 1.90 higher)*	LOW	CRITICAL **IMP. BENEFIT**
Vegetable intake (14 days intervention) - other (at parents' convenience) (follow up immediately post-intervention; Better indicated by higher values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Interventions using information provision and/or education to enhance healthy eating and drinking practices**	**Status quo (including no treatment)**	**Relative (95% CI)**	**Absolute**		
1 (Wardle 2003)	randomised trials	serious[7]	no serious inconsistency	no serious indirectness	no serious imprecision	none	48	44	-	MD 0.40 lower (5.12 lower to 4.32 higher)	MODERATE	CRITICAL **NO IMP. DIFF.**
Vegetable intake (1 year intervention) - Healthcare setting (child health clinics) (follow up 42 months; Better indicated by higher values)												
1 (Magarey 2016)[4]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	260	281	-	MD 0.10 higher (1.15 lower to 1.35 higher)	LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake (2 years intervention) – Nurseries/playgroups/schools (follow up immediately post-intervention; Better indicated by higher values)												
1 (De Coen 2012)	randomised trials	very serious[2]	no serious inconsistency	serious[3]	no serious imprecision	none	268	201	-	MD 7.9 higher (3.03 lower to 18.83 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**
BMI z-score (1 year intervention) – Healthcare settings (Child health clinics) (- follow-up 42 months; Better indicated by lower values)												
1 (Daniels 2015)[4]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	213	211	-	MD 0.07 lower (0.24 lower to 0.1 higher)	LOW	CRITICAL **NO IMP. DIFF.**
BMI z-score (1 to 2 years intervention) – Nurseries/playgroups/schools (follow-up immediately post intervention; Better indicated by lower values)												
2[1]	randomised trials	very serious[2]	no serious inconsistency	serious[3]	no serious imprecision	none	506	328	-	MD 0.03 lower (0.16 lower to 0.1 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**
BMI z-score (2 years intervention) – other (at parents' convenience – telephone/SMS) (follow up immediately post-intervention; Better indicated by lower values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Interventions using information provision and/or education to enhance healthy eating and drinking practices**	**Status quo (including no treatment)**	**Relative (95% CI)**	**Absolute**		
1 (Wen 2022)	randomised trials	serious[7]	no serious inconsistency	no serious indirectness	no serious imprecision	none	770	385	-	MD 0.01 lower (0.19 lower to 0.17 higher)	MODERATE	CRITICAL **NO IMP. DIFF.**
BMI z-score (4 months intervention) – unknown (follow up 5 months; Better indicated by lower values)												
1 (Toussaint 2021)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	64	59	-	MD 0.03 higher (0.32 lower to 0.38 higher)	LOW	CRITICAL **NO IMP. DIFF.**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; MD: mean difference; ml/d: millilitres per day; RR: relative risk; SMD: standardised mean difference
1 De Coen 2012, Verbestel 2014
2 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
3 Population is indirect due to inclusion of children aged >5 years in one study and the proportion is unclear
4 Details of intervention in this comparison: 1 year intervention delivered in two 3-month phases with 6 months interval (Daniels 2014, Daniels 2015, Magarey 2016)
5 95% CI crosses 1 MID (0.8 and 1.25)
6 95% CI crosses 2 MIDs (0.8 and 1.25)
7 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2
8 De Coen 2012, Kobel 2019, Verbestel 2014

Table 14: Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Component 6: Behavioural change models, techniques and theories

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Sugar sweetened beverage (ml/d) (2 years intervention) – Socio-ecological model in health promotion programmes (follow up immediately post-intervention; Better indicated by lower values)												
1 (De Coen 2012)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	no serious imprecision	none	268	201	-	MD 4.5 lower (20.62 lower to 11.62 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Sugar sweetened beverage (ml/d) (12 months intervention) – Other (theories of information processing, the elaboration likelihood model and the precaution-adoption process model) (follow up immediately post-intervention; Better indicated by lower values)												
1 (Verbestel 2014)	randomised trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	38	21	-	MD 11.51 lower (35.26 lower to 12.24 higher)	LOW	CRITICAL **NO IMP. DIFF.**
Sugar sweetened beverage (ml/d) (1 year intervention) – No theory mentioned (follow up 42 months; Better indicated by lower values)												
1 (Magarey 2016)[5]	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	213	211	-	MD 0.1 lower (1.49 lower to 1.29 higher)	LOW	CRITICAL **NO IMP. DIFF.**
Sugar sweetened beverage intake (≥ daily) (1 year intervention) – Social cognitive theory and social ecological approach (follow up immediately post-intervention)												
1 (Kobel 2019)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[6]	none	7/172 (4.1%)	8/130 (6.2%)	RR 0.66 (0.25 to 1.78)	21 fewer per 1000 (from 46 fewer to 48 more)	VERY LOW	CRITICAL **NO EV. OF IMP. DIFF.**
Sugar sweetened beverage intake (≥ daily) (1 year intervention*) – No theory mentioned (follow up 6 months)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
1 (Daniels 2014)[5]	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[7]	none	83/249 (33.3%)	95/266 (35.7%)	RR 0.93 (0.74 to 1.18)	25 fewer per 1000 (from 93 fewer to 64 more)	VERY LOW	CRITICAL **NO IMP. DIFF.**
No sugar sweetened beverage (soft drink, squash for example Ribena or cordial drinks) (2 year intervention) – Other (Health belief model) (follow up immediately post intervention)												
1 (Wen 2022)	randomised trials	serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	685/770 (89%)	338/385 (87.8%)	RR 1.01 (0.97 to 1.06)	9 more per 1000 (from 26 fewer to 53 more)	MODERATE	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake (1 year intervention) – Social cognitive theory and social ecological approach (Better indicated by higher values) (follow up immediately post-intervention)												
1 (Kobel 2019)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	318	240	-	SMD 0.06 lower (0.23 lower to 0.12 higher)*	LOW	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake (2 years intervention) – Other (Socio-ecological model) (Better indicated by higher values) (follow up immediately post intervention)												
1 (De Coen 2012)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	no serious imprecision	none	396	298	-	SMD 0.12 higher (0.13 lower to 0.38 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake (12 months intervention) – Other (theories of information processing, the elaboration likelihood model and the precaution-adoption process model) (follow up immediately post intervention; Better indicated by higher values)												
1 (Verbestel 2014)	randomised trials	serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	58	36	-	SMD 0.06 higher (0.36 lower to 0.49 higher)*	MODERATE	CRITICAL **NO IMP. DIFF.**

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Interventions using information provision and/or education to enhance healthy eating and drinking practices**	**Status quo (including no treatment)**	**Relative (95% CI)**	**Absolute**		
Fruit and vegetable intake (6 months intervention) – No theory mentioned (follow up 2 to 4 months; Better indicated by higher values)												
1 (Kristiansen 2019)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	137	160	-	SMD 0.08 higher (0.15 lower to 0.31 higher)*	LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake (10 weeks to 1 year intervention) – No theory mentioned (follow up 24 weeks to 6 months; Better indicated by higher values)												
2[5, 8]	randomised trials	very serious[1]	very serious[9]	no serious indirectness	very serious[10]	none	313	265	-	SMD 0.58 higher (0.61 lower to 1.78 higher)*	VERY LOW	CRITICAL **NO EV. OF IMP. DIFF.**
Vegetable intake (2 years intervention) – follow up 0 – 6 months – Other (socio-ecological model) (follow up immediately post-intervention; Better indicated by higher values)												
1 (De Coen 2012)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	no serious imprecision	none	268	201	-	MD 7.90 higher (3.03 lower to 18.83 higher)	VERY LOW	CRITICAL **NO IMP. DIFF**.
Vegetable intake (14 days to 1 year intervention) – No theory mentioned (follow up immediately post-intervention to 42 months; Better indicated by higher values)												
2[5, 11]	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	308	325	-	SMD 0.01 higher (0.15 lower to 0.16 higher)	LOW	CRITICAL **NO IMP. DIFF.**
BMI z-score (2 years intervention) – Other (Socio-ecological model) (follow-up immediately post intervention; Better indicated by lower values)												
1 (De Coen 2012)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	no serious imprecision	none	452	299	-	MD 0.04 lower (0.18 lower to 0.1 higher)	VERY LOW	CRITICAL **NO IMP. DIFF**.

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
BMI z-score (2 years intervention) – Other (Health belief model) (follow-up immediately post-intervention; Better indicated by lower values)												
1 (Wen 2022)	randomised trials	serious[3]	no serious inconsistency	no serious indirectness	no serious imprecision	none	770	385	-	MD 0.01 lower (0.19 lower to 0.17 higher)	MODERATE	CRITICAL **NO IMP. DIFF**.
BMI z-score (12 months intervention) – Other (theories of information processing, the elaboration likelihood model and the precaution-adoption process model) (follow-up immediately post-intervention; Better indicated by lower values)												
1 (Verbestel 2014)	randomised trials	serious[3]	no serious inconsistency	no serious indirectness	serious[4]	none	54	29	-	MD 0.08 higher (0.35 lower to 0.51 higher)	LOW	CRITICAL **NO IMP. DIFF**.
BMI z-score (4 months – 1 year intervention) – No theory mentioned (follow-up 5 – 42 months; Better indicated by lower values)												
2[5, 12]	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	277	270	-	MD 0.05 lower (0.2 lower to 0.1 higher)	LOW	CRITICAL **NO IMP. DIFF**.

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; MD: mean difference; ml/d: millilitres per day; RR: relative risk; SMD: standardised mean difference
1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
2 Population is indirect due to inclusion of children aged >5 years in one study and the proportion is unclear
3 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2
4 95% CI crosses 1 MID (0.5 x control group SD at follow up = +/- 23.05 for Sugar sweetened beverage (ml/d) – Other (theories of information processing, the elaboration likelihood model and the precaution-adoption process model); +/- 0.46 for BMI z-score – Other (theories of information processing, the elaboration likelihood model and the precaution-adoption process model))
5 Details of intervention in this comparison: 1 year intervention delivered in two 3-month phases with 6 months interval (Daniels 2014, Daniels 2015 and Magarey 2016)
6 95% CI crosses 2 MIDs (0.8 and 1.25)
7 95% CI crosses 1 MID (0.8 and 1.25)
8 Daniels 2014, Nekitsing 2019

9 Very serious heterogeneity unexplained by subgroup analysis (I^2 = 92%)
10 95% CI crosses 2 MIDs (±0.5 for SMD estimates reported in Hodder 2020)
11 Magarey 2016, Wardle 2003
12 Daniels 2015, Toussaint 2021

Table 15: Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Low socio-economic status/disadvantaged populations strata (Mixed strata for parental education, and parental age) – Component 1: Mode of delivery

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Fruit and vegetable intake – follow up immediately post-intervention (9 months intervention) – component of the intervention Face-to-face interventions (Better indicated by higher values)												
1 (Watt 2009)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	124	115	-	SMD 0.07 lower (0.32 lower to 0.19 higher)*	LOW	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake (intervention duration: 6 to 11 months) (follow-up: unclear) – component of intervention Face-to-face, printed and audio interventions (Better indicated by higher values)												
1 (Haire-Joshu 2008)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	605	701	-	SMD 0.03 higher (0.08 lower to 0.14 higher)*	LOW	CRITICAL **NO IMP. DIFF.**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

Table 16: Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Low socio-economic status/disadvantaged populations strata (Mixed strata for parental education, and parental age) – Component 2: Interventions aimed at individuals or groups

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Fruit and vegetable intake (follow-up immediately post-intervention or unclear; Better indicated by higher values) – Components of the intervention (intervention aimed at individuals)												
2[1]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	729	816	-	SMD 0.01 higher (0.09 lower to 0.11 higher)*	LOW	CRITICAL **NO IMP. DIFF**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Haire-Joshu 2008, Watt 2009
2 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

Table 17: Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Low socio-economic status/disadvantaged populations strata (Mixed strata for parental education, and parental age) – Component 3: Individualised/tailored interventions based on needs or general interventions, aimed at the population of interest

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Fruit and vegetable intake (follow-up immediately post-intervention or unclear; Better indicated by higher values) – Components of the intervention (Individualised/tailored interventions based on needs and general interventions)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
2[1]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	729	816	-	SMD 0.01 higher (0.09 lower to 0.11 higher)*	LOW	CRITICAL **NO IMP. DIFF**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Haire-Joshu 2008, Watt 2009
2 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

Table 18: Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Low socio-economic status/disadvantaged populations strata (Mixed strata for parental education, and parental age) – Component 4: Who delivers the intervention

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Fruit and vegetable intake – (intervention delivery 6 to 11 months) (follow-up unclear) – Components of the intervention (Peer-parent educators) (Better indicated by higher values)												
1 (Haire-Joshu 2008)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	605	701	-	SMD 0.03 higher (0.08 lower to 0.14 higher)*	LOW	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake – follow up immediately post-intervention (9 months intervention) – Components of the intervention (Healthy eating and drinking champions – local volunteer mothers) (Better indicated by higher values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
1 (Watt 2009)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	124	115	-	SMD 0.07 lower (0.32 lower to 0.19 higher)*	LOW	CRITICAL **NO IMP. DIFF.**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

Table 19: Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Low socio-economic status/disadvantaged populations strata (Mixed strata for parental education, and parental age) – Component 5: where the intervention was delivered

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Fruit and vegetable intake (follow-up immediately post-intervention or unclear; Better indicated by higher values) – Components of the intervention (during home visits)												
2[1]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	729	816	-	SMD 0.01 higher (0.09 lower to 0.11 higher)*	LOW	CRITICAL **NO IMP. DIFF**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Haire-Joshu 2008, Watt 2009
2 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

Table 20: Comparison 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus status quo (including no treatment) – Low socio-economic status/disadvantaged populations strata (Mixed strata for parental education, and parental age) – Component 6: Behaviour change models, techniques and theories

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Fruit and vegetable intake – (intervention delivery 6 to 11 months) (follow-up: unclear) – Components of the intervention (Social cognitive theory and social ecological approach) (Better indicated by higher values)												
1 (Haire-Joshu 2008)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	605	701	-	SMD 0.03 higher (0.08 lower to 0.14 higher)*	LOW	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake – follow up immediately post-intervention (9 months intervention) – Components of the intervention (Other [Social support theoretical model]) (Better indicated by higher values)												
1 (Watt 2009)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	124	115	-	SMD 0.07 lower (0.32 lower to 0.19 higher)*	LOW	CRITICAL **NO IMP. DIFF.**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

Table 21: Comparison 2: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus control (other information provision) – Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices)	Control (other information provision	Relative (95% CI)	Absolute		
Discontinued breastfeeding (6 months intervention) (follow-up 2 months)												
1 (Roset-Salla 2016)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	1/65 (1.5%)	3/64 (4.7%)	RR 0.33 (0.04 to 3.07)	31 fewer per 1000 (from 45 fewer to 97 more)	VERY LOW	CRITICAL **NO IMP. DIFF**.
Sweets, snacks and soft drinks intake (6 months intervention) (follow-up 2 months; Better indicated by lower values)												
1 (Roset-Salla 2016)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	65	64	-	MD 0.09 higher (0.28 lower to 0.46 higher)	LOW	CRITICAL **NO IMP. DIFF.**
Sweet drinks (KJ) (12 months intervention) (follow-up immediately post intervention; Better indicated by lower values)												
1(Duncanson 2013)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	84	85	-	MD 61 higher (5.58 to 116.42 higher)	VERY LOW	CRITICAL **NO IMP. DIFF**.
Fruit and vegetable intake (1 week to 12 months intervention) (follow-up immediately post-intervention to 5 months; Better indicated by higher values)												
5[4]	randomised trials	very serious[1]	serious[5]	no serious indirectness	serious[6]	none	338	327	-	SMD 0.36 higher (0.03 lower to 0.75 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF.**
Fruit intake (servings per day) (6 months intervention) (follow-up 2 months; Better indicated by higher values)												
1 (Roset-Salla 2016)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	65	64	-	MD 0.26 higher (0.11 lower to 0.63 higher)	VERY LOW	CRITICAL **NO IMP. DIFF**.
Vegetable intake (serves per day) (12 months intervention) (follow-up immediately post intervention; Better indicated by higher values)												
1 (Duncanson 2013)	randomised trials	serious[7]	no serious inconsistency	no serious indirectness	serious[3]	none	45	43	-	MD 0.11 lower (0.37 lower to 0.15 higher)	LOW	CRITICAL **NO IMP. DIFF**.
CDQ score for fruit and vegetables intake (range 0-28) (1 month intervention) (follow-up 17 months; Better indicated by higher values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices)	Control (other information provision	Relative (95% CI)	Absolute		
1 (Wolfenden 2014)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	208	186	-	MD 0.54 higher (0.35 lower to 1.43 higher)	LOW	CRITICAL **NO IMP. DIFF.**
Healthy Eating Index (HEI) score (0-100) (8 month intervention) (follow up immediately post-intervention; Better indicated by lower values)												
1 (Gans 2022)	randomised trials	serious[7]	no serious inconsistency	no serious indirectness	no serious imprecision	none	84	85	-	MD 4.3 higher (0.82 to 7.78 higher)	MODERATE	CRITICAL **NO IMP. DIFF**.
Total fats intake (g) (12 months intervention) (follow-up immediately post-intervention; Better indicated by lower values)												
1 (Duncanson 2013)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	45	43	-	MD 2.9 lower (10.57 lower to 4.77 higher)	VERY LOW	CRITICAL **NO IMP. DIFF**.
Daily intake of saturated fats (g) – (6 months intervention) (follow-up 2; Better indicated by lower values)												
1 (Roset-Salla 2016)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	65	64	-	MD 0.44 higher (2.87 lower to 3.75 higher)	LOW	CRITICAL **NO IMP. DIFF.**
Saturated fats intake (g) (12 months intervention) (follow-up immediately post intervention; Better indicated by lower values)												
1 (Duncanson 2013)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	45	43	-	MD 0.9 lower (5.16 lower to 3.36 higher)	LOW	CRITICAL **NO IMP. DIFF.**
Daily intake of sugars (g) (6 months intervention) (follow-up 2 months; Better indicated by lower values)												
1 (Roset-Salla 2016)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	65	64	-	MD 2.82 lower (14.89 lower to 9.25 higher)	LOW	CRITICAL **NO IMP. DIFF.**
Sugars intake (g) (12 months intervention) (follow-up immediately post intervention; Better indicated by lower values)												
1 (Duncanson 2013)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	45	43	-	MD 6.1 lower (22.05 lower to 9.85 higher)	VERY LOW	CRITICAL **NO IMP. DIFF**.
Attitudes about toddler milk (I think serving (fruit drinks/toddler milks) to my child is overall positive) 1-10 scale – follow up same day as intervention day (Better indicated by lower values)												
1 (Harris 2022)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	302	298	-	MD 2.1 lower (2.53 to 1.67 lower)	MODERATE	IMPORTANT **IMP. BENEFIT**
Attitudes about fruit drinks (I think serving (fruit drinks/toddler milks) to my child is overall positive) 1-10 scale – follow up same day as intervention day (Better indicated by lower values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices)	Control (other information provision	Relative (95% CI)	Absolute		
1 (Harris 2022)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	302	298	-	MD 0.93 lower (1.33 to 0.53 lower)	LOW	IMPORTANT **NO IMP. DIFF.**
Intent to serve toddler milk – follow up same day as intervention day (Better indicated by lower values)												
1 (Harris 2022)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	302	298	-	MD 0.92 lower (1.21 to 0.63 lower)	LOW	IMPORTANT **IMP. BENEFIT**
Intent to cut back on toddler milk – follow up same day as intervention day (Better indicated by higher values)												
1 (Harris 2022)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	397	299	-	MD 0.62 higher (0.37 to 0.87 higher)	LOW	IMPORTANT **NO IMP. DIFF.**
Intent to serve fruit drinks – follow up same day as intervention day (Better indicated by lower values)												
1 (Harris 2022)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	302	298	-	MD 9.5 higher (9.23 to 9.77 higher)	MODERATE	IMPORTANT **IMP. DIFF.**
Intent to cut back on fruit drinks – follow up same day as intervention day (Better indicated by higher values)												
1 (Harris 2022)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	397	299	-	MD 0.24 higher (0.02 to 0.46 higher)	MODERATE	IMPORTANT **NO IMP. DIFF.**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; MD: mean difference; RR: relative risk; SMD: standardised mean difference
1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
2 95% CI crosses 2 MIDs (0.8 and 1.25)
3 95% CI crosses 1 MID (0.5x control group SD, for Sweet drinks (KJ) = 83.5; for Fruit intake (serves per day) = 0.615); for Vegetable intake (serves per day) = 0.32; for Total fats intake (g) = 8.775; for Sugars intake (g) = 16.41; for Attitudes about fruit drinks = 1.2 (no baseline SD for control group); for Intent to serve toddler milk = 0.89 (no baseline SD for control group); for Intent to cut back on toddler milk = 0.865 (no baseline SD for control group))
4 Duncanson 2013, Hong 2018, Roset-Salla 2016, Tabak 2012, Wyse 2012
5 Serious heterogeneity unexplained by subgroup analysis (I^2 = 78%)
6 95% CI crosses 1 MID (0.8 and 1.25)
7 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2

The following GRADE tables (Table 22 to Table 27) are a sensitivity analysis for Comparison 2 with intervention components: mode of delivery, when the intervention is delivered, interventions aimed at individuals or groups, individualised or targeted interventions, who delivers the intervention, where the intervention is delivered. Sensitivity analyses were conducted when 2 or more studies of the same study design reported on the same outcome.

Table 22: Comparison 2: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus control (other information provision) – Component 1: Mode of delivery (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Control (other information provision)	Relative (95% CI)	Absolute		
Fruit and vegetable intake (6 months intervention) – Face-to-face interventions (follow-up 2 months; Better indicated by higher values)												
1 (Roset-Salla 2016)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	75	74	-	SMD 0.78 higher (0.42 to 1.13 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**
Fruit and vegetable intake (4 weeks intervention) – Face-to-face and printed interventions (follow-up immediately post-intervention; Better indicated by higher values)												
1 (Hong 2018)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	22	20	-	SMD 0.51 higher (0.91 lower to 1.22 higher)*	VERY LOW	CRITICAL **NO EV. OF IMP. DIFF.**
Fruit and vegetable intake (4 weeks to 4 months intervention) – Printed and audio (telephone) interventions (follow up immediately post-intervention to 5 months; Better indicated by higher values)												
2[3]	randomised trials	very serious[1]	serious[4]	no serious indirectness	serious[2]	none	196	190	-	SMD 0.40 higher (0.04 lower to 0.85 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake (12 month intervention) – Printed and visual (CD/DVD) (follow up immediately post-intervention; Better indicated by higher values)												
1 (Duncanson 2013)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	45	43	-	SMD 0.35 lower (0.77 lower to 0.07 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF.**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
2 95% CI crosses 1 MID (0.8 and 1.25)
3 Tabak 2012, Wyse 2012

4 Serious heterogeneity unexplained by subgroup analysis (I^2 = 53%)

Table 23: Comparison 2: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus control (other information provision) – Component 2: Interventions aimed at individuals or groups (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Control (other information provision)	Relative (95% CI)	Absolute		
Fruit and vegetable intake (4 weeks to 12 months intervention) – interventions aimed at individuals (follow up 0-5 months; Better indicated by higher values)												
4[1]	randomised trials	very serious[2]	serious[3]	no serious indirectness	serious[4]	none	263	253	-	SMD 0.23 higher (0.18 lower to 0.65 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake (6 months intervention) – interventions aimed at groups (follow-up 2 months; Better indicated by higher values)												
1 (Roset-Salla 2016)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	serious[4]	none	75	74	-	SMD 0.78 higher (0.42 to 1.13 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Duncanson 2013, Hong 2018, Tabak 2012, Wyse 2012
2 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
3 Serious heterogeneity unexplained by subgroup analysis (I^2=71%)
4 95% CI crosses 1 MID (0.8 and 1.25)

Table 24: Comparison 2: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus control (other information provision) – Component 3: individualised/tailored or general interventions (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Control (other information provision)	Relative (95% CI)	Absolute		
Fruit and vegetable intake (4 months intervention) – individualised/tailored interventions (follow up immediately post-intervention; Better indicated by higher values)												
1 (Tabak 2012)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	22	21	-	SMD 0.74 higher (0.12 to 1.36 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**
Fruit and vegetable intake (4 weeks to 12 months intervention) – general interventions (follow up immediately post-intervention to 5 months; Better indicated by higher values)												
4[3]	randomised trials	very serious[1]	very serious[4]	no serious indirectness	serious[2]	none	319	306	-	SMD 0.29 higher (0.16 lower to 0.73 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF.**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
2 95% CI crosses 1 MID (0.8 and 1.25)
3 Duncanson 2013, Hong 2018, Roset-Salla 2016, Wyse 2012
4 Very serious heterogeneity unexplained by subgroup analysis (I^2=82%)

Table 25: Comparison 2: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus control (other information provision) – Component 4: Who delivers the intervention? (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Control (other information provision)	Relative (95% CI)	Absolute		
Fruit and vegetable intake (6 months intervention) – Healthcare practitioner, health or social care worker (Nurses trained in nutrition) (follow up 2 months; Better indicated by higher values)												
1 (Roset-Salla 2016)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	75	74	-	SMD 0.78 higher (0.42 to 1.13 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**
Fruit and vegetable intake (4 months intervention) – Healthcare practitioner, health or social care worker (Registered dietician) (follow up immediately post-intervention; Better indicated by higher values)												
1 (Tabak 2012)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	22	21	-	SMD 0.74 higher (0.12 to 1.36 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**
Fruit and vegetable intake (4 weeks to 12 months intervention) – Healthy eating and drinking practices' champion (parents) (follow up immediately post intervention; Better indicated by higher values)												
2[3]	randomised trials	very serious[1]	serious[4]	no serious indirectness	very serious[5]	none	67	63	-	SMD 0.03 higher (0.81 lower to 0.87 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake (4 weeks intervention) – Healthy eating and drinking practices' champion (trained telephone interviewers) (follow up 5 months; Better indicated by higher values)												
1 (Wyse 2012)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	174	169	-	SMD 0.25 higher (0.04 to 0.46 higher)*	LOW	CRITICAL **NO IMP. DIFF.**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
2 95% CI crosses 1 MID (0.8 and 1.25)
3 Duncanson 2013, Hong 2018
4 Serious heterogeneity unexplained by subgroup analysis (I^2=76%)
5 95% CI crosses 2 MIDs (0.8 and 1.25)

Table 26: Comparison 2: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus control (other information provision) – Component 5: Where the intervention was delivered (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Control (other information provision)	Relative (95% CI)	Absolute		
Fruit and vegetable intake (6 months intervention) – Nurseries/ playgroups/Schools (follow-up 2 months; Better indicated by higher values)												
1 (Roset-Salla 2016)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	75	74	-	SMD 0.78 higher (0.42 to 1.13 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**
Fruit and vegetable intake (4 weeks to 12 months intervention) – other (at parents' convenience – telephone) (follow up immediately post-intervention to 5 months; Better indicated by higher values)												
3[3]	randomised trials	very serious[1]	serious[4]	no serious indirectness	serious[2]	none	241	233	-	SMD 0.18 higher (0.33 lower to 0.68 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake (4 weeks intervention) – other (at home with family) (follow up immediately post intervention; Better indicated by higher values)												
1 (Hong 2018)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	22	20	-	SMD 0.51 higher (0.19 lower to 1.22 higher)*	VERY LOW	CRITICAL **NO EV. OF IMP. DIFF.**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference

1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
2 95% CI crosses 1 MID
3 Duncanson 2013, Tabak 2012, Wyse 2012
4 Serious heterogeneity unexplained by subgroup analysis (I^2 = 79%)

Table 27: Comparison 2: Intervention group 1: Interventions using information provision and/or education to enhance healthy eating and drinking practices versus control (other information provision) – Component 6: Behaviour change models, techniques and theories (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions using information provision and/or education to enhance healthy eating and drinking practices	Control (other information provision)	Relative (95% CI)	Absolute		
Fruit and vegetable intake (12 months intervention) – Theory of planned behaviour (follow up immediately post-intervention; Better indicated by higher values)												
1 (Duncanson 2013)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	45	43	-	SMD 0.35 lower (0.77 lower to 0.07 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake (4 months intervention) – Social cognitive theory (follow up immediately post-intervention; Better indicated by higher values)												
1(Tabak 2012)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	22	21	-	SMD 0.74 higher (0.12 to 1.36 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**
Fruit and vegetable intake (4 weeks intervention) – other (social ecological theory) (follow up immediately post-intervention to 5 months; Better indicated by higher values)												
2[3]	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	196	189	-	SMD 0.27 higher (0.07 to 0.46 higher)*	LOW	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake (6 months intervention) – No theory mentioned (follow up 2 months; Better indicated by higher values)												
1 (Roset-Salla 2016)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	75	74	-	SMD 0.78 higher (0.42 to 1.13 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
2 95% CI crosses 1 MID (±0.5)
3 Hong 2018, Wyse 2012

Table 28: Comparison 3: Behavioural interventions (for example, role modelling or interventions using praise and rewards) versus status quo (including no treatment) – Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Behavioural interventions	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Vegetable intake (~1 – 5 weeks intervention) (follow-up range immediately post-intervention to ~7 months; Better indicated by higher values)												
3[1]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	101	58	-	SMD 0.48 higher (0.1 to 0.87 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake – peppers (2 weeks intervention) (follow-up 1 week; Better indicated by higher values)) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general interventions, delivered by healthy eating and drinking champions (parents), at home and other location (lab), no theory mentioned)												
1 (Cravener 2015)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	12	12	-	MD 5.8 lower (17.56 lower to 5.96 higher)	LOW	CRITICAL **NO IMP. DIFF**.
Vegetable intake – carrots (2 weeks intervention) (follow-up 1 week; Better indicated by higher values)) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general interventions, delivered by healthy eating and drinking champions (parents), at home and other location (lab), no theory mentioned)												
1 (Cravener 2015)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	very serious[6]	none	12	12	-	MD 3 higher (15.38 lower to 21.38 higher)	VERY LOW	CRITICAL **NO IMP. DIFF**.
Vegetable intake – cauliflower (2 weeks intervention) (follow-up 1 week; Better indicated by higher values)) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general interventions, delivered by healthy eating and drinking champions (parents), at home and other location (lab), no theory mentioned)												
1 (Cravener 2015)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	12	12	-	MD 0.6 higher (0.1 lower to 1.3 higher)	LOW	CRITICAL **POSS. IMP. BENEFIT**
Vegetable intake – snap peas (2 weeks intervention) (follow-up 1 week; Better indicated by higher values)) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general interventions, delivered by healthy eating and drinking champions (parents), at home and other location (lab), no theory mentioned)												
1 (Cravener 2015)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	serious[5]	none	12	12	-	MD 2 higher (1.17 lower to 5.17 higher)	LOW	CRITICAL **NO IMP. DIFF**.
Vegetable intake – celery (2 weeks intervention) (follow-up 1 week; Better indicated by higher values) Components of the intervention (face-to-face intervention, aimed at individuals, tailored and general interventions, delivered by healthy eating and drinking champions (parents), at home and other location (lab), no theory mentioned)												
1 (Cravener 2015)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	very serious[6]	none	12	12	-	MD 4 higher (3.77 lower to 11.77 higher)	VERY LOW	CRITICAL **IMP. BENEFIT**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; MD: mean difference; SMD: standardised mean difference

1 Cravener 2015, Staiano 2016, Zeinstra 2017
2 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
3 95% CI crosses 1 MID
4 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2
5 95% CI crosses 1 MID (0.5x control group SD, for Vegetable intake – peppers = 6.85; for Vegetable intake – cauliflower = 0.4; for Vegetable intake – snap peas = 2.6)
6 95% CI crosses 2 MIDs (0.5x control group SD, Vegetable intake – carrots = 13.5; for Vegetable intake – celery = 3.7)

The following GRADE tables (Table 29 to Table 34) are a sensitivity analysis for Comparison 3 with intervention components: mode of delivery, when the intervention is delivered, interventions aimed at individuals or groups, individualised or targeted interventions, who delivers the intervention, where the intervention is delivered. Sensitivity analyses were conducted when 2 or more studies of the same study design reported on the same outcome.

Table 29: Comparison 3: Behavioural interventions (for example, role modelling or interventions using praise and rewards) versus status quo (including no treatment) – Component 1: Mode of delivery (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Behavioural interventions	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Vegetable intake (2 weeks intervention) – Face-to-face interventions (follow up 1 week; Better indicated by higher values)												
1 (Cravener 2015)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	12	12	-	SMD 0.57 higher (0.25 lower to 1.39 higher)*	LOW	CRITICAL **NO EV. OF IMP. DIFF.**
Vegetable intake (~1 week to 5 weeks intervention) – Visual (video) interventions (follow up immediately post intervention to ~7 months; Better indicated by higher values)												
2[3]	randomised trials	very serious[4]	no serious inconsistency	no serious indirectness	serious[2]	none	89	46	-	SMD 0.46 higher (0.02 to 0.9 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF.**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference

1 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2
2 95% CI crosses 1 MID
3 Staiano 2016, Zeinstra 2017
4 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

Table 30: Comparison 3: Behavioural interventions (for example, role modelling or interventions using praise and rewards) versus status quo (including no treatment) – Component 2: Intervention aimed at individuals or groups (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Behavioural interventions	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Vegetable intake (~1 to 2 weeks intervention)- interventions aimed at individuals (follow up immediately post intervention to 1 week; Better indicated by higher values)												
2[1]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	26	40	-	SMD 0.62 higher (0.11 to 1.13 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**
Vegetable intake (4 to 5 weeks intervention) – interventions aimed at groups (follow up ~7months; Better indicated by higher values)												
1 (Zeinstra 2017)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	serious[3]	none	75	18	-	SMD 0.31 higher (0.28 lower to 0.89 higher)*	LOW	CRITICAL **NO IMP. DIFF**.

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Cravener 2015, Staiano 2016
2 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
3 95% CI crosses 1 MID

4 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2

Table 31: Comparison 3: Behavioural interventions (for example, role modelling or interventions using praise and rewards) versus status quo (including no treatment) – Component 3: individualised/tailored or general interventions (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Behavioural interventions	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Vegetable intake (~1 week to 5 weeks intervention) – individualised/tailored interventions (follow up immediately post-intervention to ~7 months; Better indicated by higher values)												
2[1]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	89	46	-	SMD 0.46 higher (0.02 to 0.9 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake (2 weeks intervention)- individualised/tailored and general interventions (follow up 1 week; Better indicated by higher values)												
1 (Cravener 2015)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	serious[3]	none	12	12	-	SMD 0.57 higher (0.25 lower to 1.39 higher)*	LOW	CRITICAL **NO EV. OF IMP. DIFF.**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Staiano 2016, Zeinstra 2017
2 Very serious risk of bias in I evidence contributing to the outcomes as per RoB 2
3 95% CI crosses 1 MID

4 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2

Table 32: Comparison 3: Behavioural interventions (for example, role modelling or interventions using praise and rewards) versus status quo (including no treatment) – Component 4: Who delivers the intervention (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Behavioural interventions	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Vegetable intake (2 weeks intervention) – Healthy eating and drinking practices' champion (parent) (follow up 1 week; Better indicated by higher values)												
1 (Cravener 2015)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	12	12	-	SMD 0.57 higher (0.25 lower to 1.39 higher)*	LOW	CRITICAL **NO EV. OF IMP. DIFF.**
Vegetable intake (4 to 5 weeks intervention) – Early years professional (teacher) (follow up ~7 months; Better indicated by higher values)												
1 (Zeinstra 2017)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	75	18	-	SMD 0.31 higher (0.28 lower to 0.89 higher)*	LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake (~1 week intervention) – unclear (follow up immediately post intervention; Better indicated by higher values)												
1 (Staiano 2016)	randomised trials	very serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	14	28	-	SMD 0.65 higher (0.01 lower to 1.31 higher)*	VERY LOW	CRITICAL **POSS. IMP. BENEFIT**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference

1 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2
2 95% CI crosses 1 MID

3 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

Table 33: Comparison 3: Behavioural interventions (for example, role modelling or interventions using praise and rewards) versus status quo (including no treatment) – Component 5: Where the intervention was delivered (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Behavioural interventions	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Vegetable intake (~1 week to 5 weeks intervention) – Nurseries/playgroups/schools (follow up immediately post-intervention to ~7 months; Better indicated by higher values)												
2[1]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	89	46	-	SMD 0.46 higher (0.02 to 0.9 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake (2 weeks intervention) – other (home and lab) (follow up 1 week; Better indicated by higher values)												
1 (Cravener 2015)	randomised trials	serious[4]	no serious inconsistency	no serious indirectness	serious[3]	none	12	12	-	SMD 0.57 higher (0.25 lower to 1.39 higher)*	LOW	CRITICAL **NO EV. OF IMP. DIFF.**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Staiano 2016, Zeinstra 2017
2 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
3 95% CI crosses 1 MID

4 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2

Table 34: Comparison 3: Behavioural interventions (for example, role modelling or interventions using praise and rewards) versus status quo (including no treatment) – Component 6: Behavioural change models, techniques and theories (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Behavioural interventions	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Vegetable intake (~1 to 5 weeks intervention) – No theory mentioned (follow-up immediately post intervention to ~7 months; Better indicated by higher values)												
3[1]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	serious[3]	none	101	58	-	SMD 0.48 higher (0.1 to 0.87 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF.**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Cravener 2015, Staiano 2016, Zeinstra 2017
2 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
3 95% CI crosses 1 MID

Table 35: Comparison 4: Behavioural intervention (prompting with or without modelling) versus Behavioural intervention (modelling only) – Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Behavioural intervention (prompting with or without modelling)	Behavioural intervention (modelling only)	Relative (95% CI)	Absolute		
Fruit intake (%) (1 day intervention) (follow-up immediately post-intervention; Better indicated by higher values) Components of the intervention (face-to-face intervention, aimed at individuals, general intervention, delivered by healthy eating and drinking champions (caregivers), at home, no theory mentioned)												
1 (Blissett 2016)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	72	27	-	MD 3.95 lower (21.32 lower to 13.42 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**

CI: confidence interval; MD: mean difference

1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
2 95% CI crosses 1 MID (0.5x control group SD, for Fruit intake (%) = 19.95 (SD for control group at follow-up used))

Table 36: Comparison 5: Interventions aimed at improving access to healthy foods and drinks (exposure) versus Status quo (including no treatment) – Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions aimed at improving access to healthy foods and drinks (exposure)	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Vegetable intake (1 day to 6 months intervention) (follow-up immediately post intervention to 24 weeks; Better indicated by higher values)												
7[1]	randomised trials	very serious[2]	very serious[3]	no serious indirectness	serious[4]	none	302	275	-	SMD 0.77 higher (0.29 to 1.25 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**
Vegetable intake (1 day to 6 months intervention) – No health/developmental conditions (follow-up immediately post intervention to 24 weeks; Better indicated by higher values)												
6[5]	randomised trials	very serious[2]	very serious[3]	no serious indirectness	serious[4]	none	289	261	-	SMD 0.73 higher (0.21 to 1.25 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**
Vegetable intake (6 months intervention) – Autism spectrum disorder (follow-up immediately post intervention; Better indicated by higher values) Components of the intervention (face-to-face intervention, aimed at groups, general intervention, delivered by healthcare practitioners, health and social care worker (trained therapist and assistants), at other (Early intervention agencies), no theory mentioned)												
1 (Kim 2018)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	serious[4]	none	13	14	-	SMD 1.11 higher (0.26 to 1.97 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; MD: mean difference; SMD: standardised mean difference
1 Farrow 2019, Kim 2018, Lee 2015, Nekitsing 2019, O'Connell 2012, Wardle 2003, Zeinstra 2018
2 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
3 Very serious heterogeneity unexplained by subgroup analysis (I^2 = 81% for Vegetable intake (1 day – 6 months intervention); I^2 = 83% for Vegetable intake (1 day – 6 months intervention) – No health/developmental conditions). Random effects analysis used.
4 95% CI crosses 1 MID (±0.5 for SMD estimates reported in Hodder 2020)
5 Farrow 2019, Lee 2015, Nekitsing 2019, O'Connell 2012, Wardle 2003, Zeinstra 2018

Table 37: Comparison 5: Interventions aimed at improving access to healthy foods and drinks (exposure) versus Status quo (including no treatment) – Low socioeconomic status/ disadvantaged populations strata (Mixed strata for parental education, and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions aimed at improving access to healthy foods and drinks (exposure)	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Vegetable intake (3 weeks intervention) (follow-up ~9 weeks; Better indicated by higher values). Components of the intervention (face-to-face, aimed at individuals, general intervention, delivered by peer (researcher), at nurseries/playgroups/schools and no theory mentioned)												
1 (Cooke 2011)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	97	106	-	SMD 0.05 higher (0.23 lower to 0.32 higher)*	MODERATE	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake (8 weeks intervention) (follow-up immediately post intervention; measured with: Mean carotenoid scores of fruits and vegetables; Better indicated by higher values). Components of the intervention (face-to-face, aimed at individuals, general intervention, unclear who delivered intervention, at home and at nurseries/playgroups/schools and no theory mentioned)												
1 (Smith 2020)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	38	41	-	MD 2264 higher (91.87 lower to 4436.13 higher)	LOW	CRITICAL **NO IMP. DIFF.**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; MD: mean difference; SMD: standardised mean difference
1 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2
2 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

The following GRADE tables (Table 38 to Table 43) are a sensitivity analysis for Comparison 5 with intervention components: mode of delivery, when the intervention is delivered, interventions aimed at individuals or groups, individualised or targeted interventions, who delivers the intervention, where the intervention is delivered. Sensitivity analyses were conducted when 2 or more studies of the same study design reported on the same outcome.

Table 38: Comparison 5: Interventions aimed at improving access to healthy foods and drinks (exposure) versus Status quo (including no treatment) – Component 1: Mode of delivery (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions aimed at improving access to healthy foods and drinks (exposure)	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Vegetable intake – face-to-face interventions (6 weeks to 6 months intervention) (follow up immediately post-intervention; Better indicated by higher values)												
3[1]	randomised trials	very serious[2]	very serious[3]	no serious indirectness	serious[4]	none	80	90	-	SMD 1,23 higher (0.17 lower to 2.64 higher)*	VERY LOW	CRITICAL **POSS. IMP. BENEFIT**
Vegetable intake – face-to-face interventions – No health/developmental conditions (6 weeks to 6 months intervention) (follow up immediately post-intervention; Better indicated by higher values)												
2[5]	randomised trials	very serious[2]	very serious[3]	no serious indirectness	very serious[6]	none	67	76	-	SMD 1.32 higher (1.05 lower to 3.69 higher)*	VERY LOW	CRITICAL **NO EV. OF IMP. DIFF.**
Vegetable intake – face-to-face interventions – Autism spectrum disorder (6 months intervention) (follow up immediately post-intervention; Better indicated by higher values)												
1 (Kim 2018)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	serious[4]	none	13	14	-	SMD 1.11 higher (0.26 to 1.97 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**
Vegetable intake – face-to-face and printed interventions (14 days to 10 weeks interventions) (follow up immediately post-intervention to 24 weeks; Better indicated by higher values)												
2[7]	randomised trials	very serious[2]	very serious[3]	no serious indirectness	serious[4]	none	81	60	-	SMD 0.66 higher (0.44 lower to 1.75 higher)*	VERY LOW	CRITICAL **NO EV. OF IMP. DIFF.**
Vegetable intake – face-to-face and audio (song) interventions (Better indicated by higher values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions aimed at improving access to healthy foods and drinks (exposure)	Status quo (including no treatment)	Relative (95% CI)	Absolute		
1 (Zeinstra 2018)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	serious[4]	none	101	91	-	SMD 0.31 higher (0.05 lower to 1.75 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF**.
Vegetable intake – electronic (digital games) interventions (Better indicated by higher values)												
1 (Farrow 2019)	randomised trials	serious[8]	no serious inconsistency	no serious indirectness	serious[4]	none	40	34	-	SMD 0.60 higher (0.13 to 1.07 higher)*	LOW	CRITICAL **IMP. BENEFIT**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Kim 2018, Lee 2015, O'Connell 2012
2 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
3 Very serious heterogeneity unexplained by subgroup analysis (for vegetable intake – face-to-face interventions, I^2 = 90%; for vegetable intake – face-to-face interventions – no health/developmental conditions, , I^2 = 95%; for vegetable intake – face-to-face and printed interventions, I^2=87%),. Random effects used.
4 95% CI crosses 1 MID (±0.5 for SMD estimates reported in Hodder 2020)
5 Lee 2015, O'Connell 2012
6 95% CI crosses 2 MIDs (±0.5 for SMD estimates reported in Hodder 2020)
7 Nekitsing 2019, Wardle 2003
8 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2

Table 39: Comparison 5: Interventions aimed at improving access to healthy foods and drinks (exposure) versus Status quo (including no treatment) – Component 2: Intervention aimed at individuals or groups (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions aimed at improving access to healthy foods and drinks (exposure)	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Vegetable intake – interventions aimed at individuals (1 to 14 days intervention) (follow up immediately post intervention; Better indicated by higher values)												
2[1]	randomised trials	serious[2]	serious[3]	no serious indirectness	serious[4]	none	74	78	-	SMD 0.36 higher (0.11 lower to 0.83 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake – interventions aimed at groups (6 weeks to 6 months intervention) (follow up immediately post-intervention to 24 weeks; Better indicated by higher values)												
5[5]	randomised trials	very serious[6]	very serious[7]	no serious indirectness	serious[4]	none	228	197	-	SMD 1.00 higher (0.28 to 1.72 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**
Vegetable intake – interventions aimed at groups – No health/developmental conditions (6 weeks to 6 months intervention) (follow up immediately post-intervention to 24 weeks; Better indicated by higher values)												
4[8]	randomised trials	very serious[6]	very serious[7]	no serious indirectness	serious[4]	none	215	183	-	SMD 0.98 higher (0.14 to 1.83 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**
Vegetable intake – interventions aimed at groups – Autism spectrum disorder (6 months intervention) (follow up immediately post-intervention; Better indicated by higher values)												
1 (Kim 2018)	randomised trials	very serious[6]	no serious inconsistency	no serious indirectness	serious[4]	none	13	14	-	SMD 1.11 higher (0.26 to 1.97 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Farrow 2019, Wardle 2003
2 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2

3 Serious heterogeneity unexplained by subgroup analysis (I^2 = 52%)
4 95% CI crosses 1 MID (±0.5 for SMD estimates reported in Hodder 2020)
5 Kim 2018, Lee 2015, Nekitsing 2019, O'Connell 2012, Zeinstra 2018
6 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
7 Very serious heterogeneity unexplained by subgroup analysis (for Vegetable intake – interventions aimed at groups, I^2 = 86%; for Vegetable intake – interventions aimed at groups – No health/developmental conditions, I^2 = 89%)
8 Lee 2015, Nekitsing 2019, O'Connell 2012, Zeinstra 2018

Table 40: Comparison 5: Interventions aimed at improving access to healthy foods and drinks (exposure) versus Status quo (including no treatment) – Component 3: individualised/tailored or general interventions (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions aimed at improving access to healthy foods and drinks (exposure)	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Vegetable intake – general interventions (1 day to 6 months intervention) (follow-up immediately post-intervention to 24 weeks; Better indicated by higher values)												
7[1]	randomised trials	very serious[2]	very serious[3]	no serious indirectness	serious[4]	none	302	275	-	SMD 0.77 higher (0.29 to 1.25 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**
Vegetable intake – general interventions – No health/developmental conditions (1 day – 6 months intervention) (follow-up immediately post intervention to 24 weeks; Better indicated by higher values)												
6[5]	randomised trials	very serious[2]	very serious[3]	no serious indirectness	serious[4]	none	289	261	-	SMD 0.73 higher (0.21 to 1.25 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**
Vegetable intake – general interventions – Autism spectrum disorder (6 months intervention) (follow-up immediately post intervention; Better indicated by higher values)												
1 (Kim 2018)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	serious[4]	none	13	14	-	SMD 1.11 higher (0.26 to 1.97 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference

1 Farrow 2019, Kim 2018, Lee 2015, Nekitsing 2019, O'Connell 2012, Wardle 2003, Zeinstra 2018
2 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
3 Very serious heterogeneity unexplained by subgroup analysis (I^2=81% for Vegetable intake -general interventions; I^2 = 83% for Vegetable intake – general interventions – No health/developmental conditions). Random effects analysis used.
4 95% CI crosses 1 MID (±0.5 for SMD estimates reported in Hodder 2020)
5 Farrow 2019, Lee 2015, Nekitsing 2019, O'Connell 2012, Wardle 2003, Zeinstra 2018

Table 41: Comparison 5: Interventions aimed at improving access to healthy foods and drinks (exposure) versus Status quo (including no treatment) – Component 4: Who delivers the intervention (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions aimed at improving access to healthy foods and drinks (exposure)	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Vegetable intake – Healthcare practitioner, health or social care worker (trained therapists and assistants) – Autism spectrum disorder (Better indicated by higher values)												
1 (Kim 2018)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	13	14	-	SMD 1.11 higher (0.26 to 1.97 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**
Vegetable intake – Peer (researcher) (1 day intervention) (follow up immediately post-intervention; Better indicated by higher values)												
1 (Farrow 2019)	randomised trials	serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	40	34	-	SMD 0.60 higher (0.13 to 1.07 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**
Vegetable intake – Healthy eating and drinking practices' champion (parents) (Better indicated by higher values)												
1 (Wardle 2003)	randomised trials	serious[3]	no serious inconsistency	no serious indirectness	serious[2]	none	34	44	-	SMD 0.12 higher (0.32 lower to 0.57 higher)*	LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake – Early years professional (teachers or preschool staff or childcare employees) (6 weeks to 6 months intervention) (follow-up immediately post-intervention to 24 weeks; Better indicated by higher values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions aimed at improving access to healthy foods and drinks (exposure)	Status quo (including no treatment)	Relative (95% CI)	Absolute		
4[4]	randomised trials	very serious[1]	very serious[5]	no serious indirectness	serious[2]	none	215	183	-	SMD 0.98 higher (0.14 to 1.83 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
2 95% CI crosses 1 MID (±0.5 for SMD estimates reported in Hodder 2020)
3 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2
4 Lee 2015, Nekitsing 2019, O'Connell 2012, Zeinstra 2018
5 Very serious heterogeneity unexplained by subgroup analysis (I^2 = 89%)

Table 42: Comparison 5: Interventions aimed at improving access to healthy foods and drinks (exposure) versus Status quo (including no treatment) – Component 5: Where the intervention was delivered (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions aimed at improving access to healthy foods and drinks (exposure)	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Vegetable intake – Nurseries/play groups/schools (1 day to 6 months intervention) (follow-up immediately post-intervention to 24 weeks; Better indicated by higher values)												
5[1]	randomised trials	very serious[2]	very serious[3]	no serious indirectness	serious[4]	none	255	217	-	SMD 0.87 higher (0.25 to 1.50 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**
Vegetable intake – Other (at home at parents' convenience) (Better indicated by higher values)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Interventions aimed at improving access to healthy foods and drinks (exposure)**	**Status quo (including no treatment)**	**Relative (95% CI)**	**Absolute**		
1 (Wardle 2003)	randomised trials	serious[5]	no serious inconsistency	no serious indirectness	serious[4]	none	34	44	-	SMD 0.12 higher (0.32 lower to 0.57 higher)*	LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake – Other (Early intervention agencies) (Better indicated by higher values)												
1 (Kim 2018)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	serious[4]	none	13	14	-	SMD 1.11 higher (0.26 to 1.97 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Farrow 2019, Lee 2015, Nekitsing 2019, O'Connell 2012, Zeinstra 2018
2 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
3 Very serious heterogeneity unexplained by subgroup analysis (I^2=85%)
4 95% CI crosses 1 MID (±0.5 for SMD estimates reported in Hodder 2020)
5 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2

Table 43: Comparison 5: Interventions aimed at improving access to healthy foods and drinks (exposure) versus Status quo (including no treatment) – Component 6: Behavioural change models, techniques and theories (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Interventions aimed at improving access to healthy foods and drinks (exposure)	Versus status quo (including no treatment)	Relative (95% CI)	Absolute		
Vegetable intake – No theory mentioned (1 day to 6 months intervention) (follow-up immediately post-intervention to 24 weeks; Better indicated by higher values)												
7[1]	randomised trials	very serious[2]	very serious[3]	no serious indirectness	serious[4]	none	302	275	-	SMD 0.77 higher (0.29 to 1.25 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**
Vegetable intake – No theory mentioned – No health/developmental conditions (1 day – 6 months intervention) (follow-up immediately post intervention to 24 weeks; Better indicated by higher values)												
6[5]	randomised trials	very serious[2]	very serious[3]	no serious indirectness	serious[4]	none	289	261	-	SMD 0.73 higher (0.21 to 1.25 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**
Vegetable intake – No theory mentioned – Autism spectrum disorder (6 months intervention) (follow-up immediately post intervention; Better indicated by higher values)												
1 (Kim 2018)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	serious[4]	none	13	14	-	SMD 1.11 higher (0.26 to 1.97 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Farrow 2019, Kim 2018, Lee 2015, Nekitsing 2019, O'Connell 2012, Wardle 2003, Zeinstra 2018
2 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
3 Very serious heterogeneity unexplained by subgroup analysis (for Vegetable intake – No theory mentioned, I^2 = 81%; Vegetable intake – No theory mentioned – No health/developmental conditions, I^2 = 83%)
4 95% CI crosses 1 MID (±0.5 for SMD estimates reported in Hodder 2020)
5 Farrow 2019, Lee 2015, Nekitsing 2019, O'Connell 2012, Wardle 2003, Zeinstra 2018

Table 44: Comparison 6: Multicomponent interventions using information provision plus behavioural intervention (story book with vegetable superhero and sticker, or cartoon-like character, or cartoon character brand packaging and stickers) versus information provision (standard information or healthy eating information) – Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Multicomponent interventions using information provision plus behavioural intervention	Information provision (standard information)	Relative (95% CI)	Absolute		
Vegetable intake (lettuce) portions (behavioural intervention: story book with vegetable superhero and sticker) (5 week intervention) (follow-up 23 weeks; Better indicated by higher values) Components of the intervention (face-to-face and printed intervention, aimed at groups, general interventions, delivered by peers (researchers), at nurseries/playgroups/schools (preschool), no theory mentioned)												
1 (Braga-Pontes 2022)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	serious[3]	none	23	18	-	MD 1.06 lower (2.48 lower to 0.36 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake (carrot) portions (behavioural intervention: story book with vegetable superhero and sticker) (5 week intervention) (follow-up 23 weeks; Better indicated by higher values) Components of the intervention (face-to-face and printed intervention, aimed at groups, general interventions, delivered by peers (researchers), at nurseries/playgroups/schools (preschool), no theory mentioned)												
1 (Braga-Pontes 2022)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	serious[3]	none	23	18	-	MD 2.63 lower (5 to 0.26 lower)	VERY LOW	CRITICAL **IMP. DIFF.**
Vegetable intake (purple cabbage) portions (behavioural intervention: story book with vegetable superhero and sticker) (5 week intervention) (follow-up 23 weeks; Better indicated by higher values) Components of the intervention (face-to-face and printed intervention, aimed at groups, general interventions, delivered by peers (researchers), at nurseries/playgroups/schools (preschool), no theory mentioned)												
1 (Braga-Pontes 2022)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	serious[3]	none	23	18	-	MD 3.28 lower (6.34 to 0.22 lower)	VERY LOW	CRITICAL **IMP. DIFF.**
Vegetable intake (cucumber) portions (behavioural intervention: story book with vegetable superhero and sticker) (5 week intervention) (follow-up 23 weeks; Better indicated by higher values) Components of the intervention (face-to-face and printed intervention, aimed at groups, general interventions, delivered by peers (researchers), at nurseries/playgroups/schools (preschool), no theory mentioned)												
1 (Braga-Pontes 2022)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	very serious[4]	none	23	18	-	MD 1.16 lower (3.66 lower to 1.34 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake (tomato) portions (behavioural intervention: story book with vegetable superhero and sticker) (5 week intervention) (follow-up 23 weeks; Better indicated by higher values) Components of the intervention (face-to-face and printed intervention, aimed at groups, general interventions, delivered by peers (researchers), at nurseries/playgroups/schools (preschool), no theory mentioned)												
1 (Braga-Pontes 2022)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	very serious[4]	none	23	18	-	MD 1.05 lower (3.97 lower to 1.87 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Multicomponent interventions using information provision plus behavioural intervention	Information provision (standard information)	Relative (95% CI)	Absolute		
Vegetable intake (lettuce) portions (behavioural intervention: story book or digital game with character) (5 week intervention) (follow-up 23 weeks; Better indicated by higher values) Components of the intervention (face-to-face and audio intervention, aimed at groups, general interventions, delivered by peers (researchers), at nurseries/playgroups/schools (preschool), no theory mentioned)												
1 (Braga-Pontes 2022)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	very serious[4]	none	35	18	-	MD 0.35 lower (1.88 lower to 1.18 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake (carrot) portions (behavioural intervention: story book or digital game with character) (5 week intervention) (follow-up 23 weeks; Better indicated by higher values) Components of the intervention (face-to-face and printed intervention, aimed at groups, general interventions, delivered by peers (researchers), at nurseries/playgroups/schools (preschool), no theory mentioned)												
1 (Braga-Pontes 2022)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	very serious[4]	none	35	14	-	MD 0.07 lower (3.06 lower to 2.92 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake (purple cabbage) portions (behavioural intervention: story book or digital game with character) (5 week intervention) (follow-up 23 weeks; Better indicated by higher values) Components of the intervention (face-to-face and printed intervention, aimed at groups, general interventions, delivered by peers (researchers), at nurseries/playgroups/schools (preschool), no theory mentioned)												
1 (Braga-Pontes 2022)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	serious[3]	none	35	18	-	MD 3.13 lower (6.18 to 0.08 lower)	VERY LOW	CRITICAL **IMP. DIFF.**
Vegetable intake (cucumber) portions (behavioural intervention: story book or digital game with character) (5 week intervention) (follow-up 23 weeks; Better indicated by higher values) Components of the intervention (face-to-face and printed intervention, aimed at groups, general interventions, delivered by peers (researchers), at nurseries/playgroups/schools (preschool), no theory mentioned)												
1 (Braga-Pontes 2022)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	serious[3]	none	35	18	-	MD 1.9 lower (4.21 lower to 0.41 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake (tomato) portions (behavioural intervention: story book or digital game with character) (5 week intervention) (follow-up 23 weeks; Better indicated by higher values) Components of the intervention (face-to-face and printed intervention, aimed at groups, general interventions, delivered by peers (researchers), at nurseries/playgroups/schools (preschool), no theory mentioned)												
1 (Braga-Pontes 2022)	randomised trials	very serious[1]	no serious inconsistency	serious[2]	very serious[4]	none	35	18	-	MD 1.23 lower (4.03 lower to 1.57 higher)	VERY LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake (behavioural intervention: cartoon character brand packaging and stickers) (7 weeks intervention) (follow-up immediately post-intervention; Better indicated by higher values) Components of the intervention (face-to-face, aimed at groups, general intervention, delivered by peers (researchers) and healthy eating and drinking champions (parents), at home and other location (not reported), no theory mentioned)												
1 (Keller 2012)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[3]	none	7	9	-	SMD 1.03 higher (0.04	VERY LOW	CRITICAL **POSS. IMP. BENEFIT**

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Multicomponent interventions using information provision plus behavioural intervention	Information provision (standard information)	Relative (95% CI)	Absolute		
										lower to 2.10 higher)*		

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; MD: mean difference; SMD: standardised mean difference
1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
2 Population is partially indirect due to inclusion 32/162 (19.8 %) children who were 6 years old
3 95% CI crosses 1 MID (0.5x control group SD, 'vegetable intake (lettuce) portions' = ±0.482, 'vegetable intake (carrot) portions' = ±0.8265, 'vegetable intake (purple cabbage) portions' = ±1.652, 'Vegetable intake (7 weeks intervention)' =±1.025 [study did not report SD at any timepoint. SD of control group calculated from SE of effect estimate])
4 95% CI crosses 2 MIDs (0.5x control group SD, 'vegetable intake (lettuce) portions' = ±0.482, 'vegetable intake (carrot) portions' = ±0.8265, 'vegetable intake (purple cabbage) portions' = ±1.652, 'vegetable intake (cucumber) portions' = ±0.974, 'vegetable intake (tomato) portions' = ±1.1755)
CI: confidence interval; MD: mean difference

Table 45: Comparison 7: Multicomponent intervention using information provision plus interventions aimed at improving access to foods and drinks (exposure) versus status quo (including no treatment) - Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education, and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Multicomponent intervention using information provision plus interventions aimed at improving access to foods and drinks (exposure)	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Vegetable intake (4 weeks intervention) (follow-up 3 months; Better indicated by higher values) Components of the intervention (face-to-face and printed (picture book), aimed at individuals, general intervention, delivered by healthy eating and drinking champion (parents), at home, no theory mentioned)												
1 (Owen 2018)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	serious[2]	none	48	29	-	SMD 0.38 higher (0.08 lower to 0.85 higher)*	LOW	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake (10 weeks intervention) (follow-up 24 weeks; Better indicated by higher values) Components of the intervention (face-to-face and printed intervention, aimed at groups, general intervention, delivered by early years' professionals (preschool staff members), at nurseries/playgroups/schools (preschool), no theory mentioned)												

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Multicomponent intervention using information provision plus interventions aimed at improving access to foods and drinks (exposure)	Status quo (including no treatment)	Relative (95% CI)	Absolute		
1 (Nekitsing 2019)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	47	16	-	SMD 1.44 higher (0.75 to 2.12 higher)*	VERY LOW	CRITICAL **IMP. BENEFIT**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
2 95% CI crosses 1 MID (±0.5 for SMD estimates reported in Hodder 2020)

Table 46: Comparison 7: Multicomponent intervention using information provision plus interventions aimed at improving access to foods and drinks (exposure) versus status quo (including no treatment) – Low socio-economic status/ disadvantaged populations strata (Mixed strata for parental education, and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Multicomponent intervention using information provision plus interventions aimed at improving access to foods and drinks (exposure)	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Fruit and vegetable intake (8 weeks intervention) (follow-up immediately post intervention; Better indicated by higher values) Components of the intervention (face-to-face and printed, aimed at individuals, general intervention, delivered by other (programme staff member for education intervention), unclear who delivered access intervention), at home and nurseries/playgroups/schools (preschool), no theory mentioned)												
1 (Smith 2017)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	82	66	-	SMD 0.59 higher (0.03 to 1.15 higher)*	MODERATE	CRITICAL **IMP. BENEFIT**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2

Table 47: Comparison 8: Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based

intervention) versus status quo (including no treatment) – Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education, and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based intervention)	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Sugared milk drinks (ml) (parent reported) (6 months intervention) (follow-up immediate post-intervention; Better indicated by lower values) Components of the intervention (face-to-face and printed, aimed at groups, general intervention, delivered by healthy eating and drinking champions (parents) and early years professionals (school staff), at home and at school, no theory mentioned)												
1 (Vereecken 2009)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	308	168	-	MD 9 higher (14.92 lower to 32.92 higher)	LOW	CRITICAL **NO IMP. DIFF.**
Sugared soft drinks (ml) (parent reported) – (6 months intervention) (follow-up immediate post-intervention; Better indicated by lower values) Components of the intervention (face-to-face and printed, aimed at groups, general intervention, delivered by healthy eating and drinking champions (parents) and early years professionals (school staff), at home and at school, no theory mentioned)												
1 (Vereecken 2009)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	308	168	-	MD 2 lower (17.31 lower to 13.31 higher)	LOW	CRITICAL **NO IMP. DIFF.**
Sweet drinks servings (10 weeks intervention) (follow-up 12 months; Better indicated by lower values) Components of the intervention (face-to-face and printed, aimed at groups, general intervention, delivered by healthy eating and drinking champion (trained program leader), at community health centres, using learning and social cognitive theory)												
1 (Skouteris 2015)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	71	61	-	MD 0 higher (0.14 lower to 0.14 higher)	LOW	CRITICAL **NO IMP. DIFF.**
Fruit juice (ml) (parent reported) (6 months intervention) (follow-up immediate post-intervention; Better indicated by lower values) Components of the intervention (face-to-face and printed, aimed at groups, general intervention, delivered by healthy eating and drinking champions (parents) and early years professionals (school staff), at home and at school, no theory mentioned)												
1 (Vereecken 2009)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	308	168	-	MD 10 lower (46.14 lower to 26.14 higher)	LOW	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake (10 weeks to 4 months intervention) (follow-up 1 to 6 months; Better indicated by higher values)												
2[2]	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	80	75	-	SMD 0.10 higher (0.22	VERY LOW	CRITICAL **NO IMP. DIFF.**

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based intervention)	Status quo (including no treatment)	Relative (95% CI)	Absolute		
										lower to 0.41 higher)*		
Fresh fruit intake (g) (parent reported) (6 months intervention) (follow-up immediate post-intervention; Better indicated by higher values) Components of the intervention (face-to-face and printed, aimed at groups, general intervention, delivered by healthy eating and drinking champions (parents) and early years professionals (school staff), at home and at school, no theory mentioned)												
1 (Vereecken 2009)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	308	168	-	MD 10 higher (0.2 to 19.8 higher)	LOW	CRITICAL **NO IMP. DIFF.**
Vegetable intake (g) (parent reported) (6 months intervention) (follow-up immediate post-intervention; Better indicated by higher values) Components of the intervention (face-to-face and printed, aimed at groups, general intervention, delivered by healthy eating and drinking champions (parents) and early years professionals (school staff), at home and at school, no theory mentioned)												
1 (Vereecken 2009)	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	308	168	-	MD 3 higher (4.07 lower to 10.07 higher)	LOW	CRITICAL **NO IMP. DIFF.**
BMI z-score (10 weeks intervention) (follow-up 12 months; Better indicated by lower values) Components of the intervention (face-to-face and printed, aimed at groups, general intervention, delivered by healthy eating and drinking champion (trained program leader), at community health centres, using learning and social cognitive theory)												
1 (Skouteris 2015)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	74	65	-	MD 0.1 higher (0.18 lower to 0.38 higher)	LOW	CRITICAL **NO IMP.DIFF**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; MD: mean difference; SMD: standardised mean difference
1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
2 Namenek Brouwer 2013, Skouteris 2015

Table 48: Comparison 8: Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based

intervention) versus status quo (including no treatment) - Low socio economic status/disadvantaged populations strata (Mixed strata for parental education, and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based intervention)	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Fruit and vegetable intake (4 weeks intervention) (follow-up 2 days; Better indicated by higher values) Components of the intervention (face-to-face and visual (DVD), aimed at groups, general intervention, delivered by early years' professionals (teachers) and healthy eating and drinking champions (parents), at home and at nurseries/playgroups/schools (preschool), using other ("transportation into a narrative world" theoretical framework)												
1 (Nicklas 2017)	randomised trials	serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	128	125	-	SMD 0.72 higher (0.4 to 1.04 higher)*	MODERATE	CRITICAL **IMP. BENEFIT**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2

The following GRADE tables (Table 49 to Table 54) are a sensitivity analysis for Comparison 8 with intervention components: mode of delivery, when the intervention is delivered, interventions aimed at individuals or groups, individualised or targeted interventions, who delivers the intervention, where the intervention is delivered. Sensitivity analyses were conducted when 2 or more studies of the same study design reported on the same outcome.

Table 49: Comparison 8: Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based

intervention) versus status quo (including no treatment) – Component 1: mode of delivery (Mixed strata for level of socioeconomic deprivation, parental education, and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Fruit and vegetable intake (10 weeks to 4 months intervention) – Face-to-face and printed interventions (follow up 1 to 6 months; Better indicated by higher values)												
2[1]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	80	75	-	SMD 0.10 higher (0.22 lower to 0.41 higher)*	LOW	CRITICAL **NO IMP.DIFF**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Namenek Brouwer 2013, Skouteris 2015
2 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

Table 50: Comparison 8: Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based intervention) versus status quo (including no treatment) – Component 2: Intervention aimed at individuals or groups (Mixed strata for level of socioeconomic deprivation, parental education, and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Multicomponent interventions using information provision and/or education plus behavioural interventions plus interventions aimed at improving access to healthy foods and drinks	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Fruit and vegetable intake (10 weeks to 4 months intervention) – interventions aimed at groups (follow up 1 to 6 months; Better indicated by higher values)												
2[1]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	80	75	-	SMD 0.10 higher (0.22 lower to 0.41 higher)*	LOW	CRITICAL **NO IMP.DIFF**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Namenek Brouwer 2013, Skouteris 2015
2 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

Table 51: Comparison 8: Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based intervention) versus status quo (including no treatment) – Component 3: Individualised/tailored or general interventions (Mixed strata for level of socioeconomic deprivation, parental education, and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	**Design**	**Risk of bias**	**Inconsistency**	**Indirectness**	**Imprecision**	**Other considerations**	**Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks**	**Status quo (including no treatment)**	**Relative (95% CI)**	**Absolute**		
Fruit and vegetable intake (10 weeks to 4 months intervention) – general interventions (follow-up 1 to 6 months; Better indicated by higher values)												
2[1]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	80	75	-	SMD 0.10 higher (0.22 lower to 0.41 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF.**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Namenek Brouwer 2013, Skouteris 2015
2 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

Table 52: Comparison 8: Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based intervention) versus status quo (including no treatment) – Component 4: who delivers the intervention (Mixed strata for level of socioeconomic deprivation, parental education, and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Fruit and vegetable intake (4 months intervention) – Peer (research team, health educators and gardeners) (follow-up 1 month; Better indicated by higher values)												
1 (Namenek Brouwer 2013)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	6	6	-	SMD 0.46 higher (0.69 lower to 1.62 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake (10 weeks intervention) – Peer (trained program leader) (follow-up 6 months; Better indicated by higher values)												
1 (Skouteris 2015)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	74	69	-	SMD 0.07 higher (0.26 lower to 0.4 higher)*	LOW	CRITICAL **NO IMP. DIFF.**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
2 95% CI crosses 2 MIDs (±0.5 for SMD estimates reported in Hodder 2020)

Table 53: Comparison 8: Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based intervention) versus status quo (including no treatment) – Component 5: where the intervention is delivered (Mixed strata for level of socioeconomic deprivation, parental education, and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Fruit and vegetable intake (4 months intervention) – Nurseries/playgroups/schools (follow-up 1 month; Better indicated by higher values)												
1 (Namenek Brouwer 2013)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	very serious[2]	none	6	6	-	SMD 0.46 higher (0.69 lower to 1.62 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF.**
Fruit and vegetable intake (10 weeks intervention) – Community venues (health centres) (follow-up 6 months; Better indicated by higher values)												
1 (Skouteris 2015)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	74	69	-	SMD 0.07 higher (0.26 lower to 0.4 higher)*	LOW	CRITICAL **NO IMP. DIFF.**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
2 95% CI crosses 2 MIDs (±0.5 for SMD estimates reported in Hodder 2020)

Table 54: Comparison 8: Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks (supply/exposure/garden-based intervention) versus status quo (including no treatment) – Component 6: Behaviour change models, techniques and theories (Mixed strata for level of socioeconomic deprivation, parental education, and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Multicomponent interventions using information provision and/or education plus behavioural interventions (role modelling) plus interventions aimed at improving access to healthy foods and drinks	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Fruit and vegetable intake (10 weeks to 4 months intervention) – No theory mentioned (follow-up 1 to 6 months; Better indicated by higher values)												
2[1]	randomised trials	very serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	80	75	-	SMD 0.10 higher (0.22 lower to 0.41 higher)*	VERY LOW	CRITICAL **NO IMP. DIFF.**

**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; SMD: standardised mean difference
1 Namenek Brouwer 2013, Skouteris 2015
2 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2

Table 55: Comparison 9: Multicomponent interventions using behavioural intervention plus interventions aimed at improving access to foods and drinks (exposure) versus status quo (including no treatment) - Overall estimate (Mixed strata for level of socioeconomic deprivation, parental education, and parental age)

Quality assessment							No of patients		Effect		Quality	Importance
No of studies	Design	Risk of bias	Inconsistency	Indirectness	Imprecision	Other considerations	Multicomponent interventions using behavioural intervention plus interventions aimed at improving access to foods and drinks (exposure)	Status quo (including no treatment)	Relative (95% CI)	Absolute		
Vegetable intake (14 days intervention) (behavioural intervention: tangible non-food reward-sticker) (follow-up immediately post-intervention; Better indicated by higher values) Components of the intervention (face-to-face, aimed at individuals, general intervention, delivered by healthy eating and drinking champions (parents), at home, no theory mentioned)												
1 (Fildes 2014)	randomised trials	very serious[1]	no serious inconsistency	no serious indirectness	no serious imprecision	none	98	123	-	SMD 0.85 higher (0.57 to 1.12 higher)*	LOW	CRITICAL **IMP. BENEFIT**
Vegetable intake (3 weeks intervention) (behavioural intervention: reward - combined sticker and praise) (follow-up 3 months; Better indicated by higher values) Components of the intervention (face-to-face, aimed at individuals, general intervention, delivered by healthy eating and drinking champions (parents), at home, no theory mentioned)												
1 (Remington 2012)	randomised trials	serious[2]	no serious inconsistency	no serious indirectness	no serious imprecision	none	93	47	-	SMD 0.36 higher (0.01 to 0.72 higher)*	MODERATE	CRITICAL **NO. IMP. DIFF.**

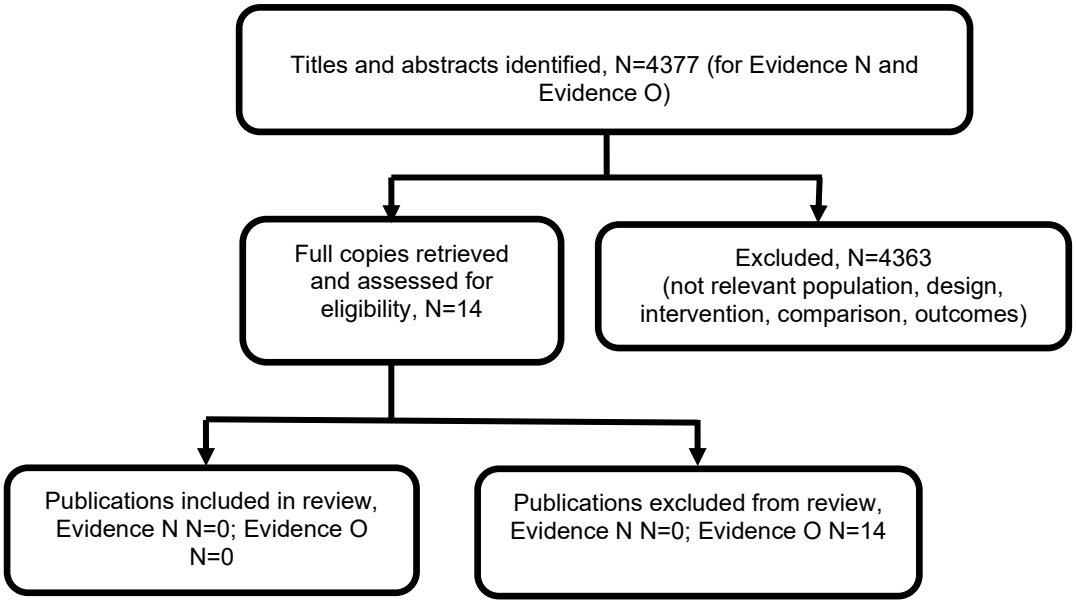
**SMDs for estimates from Hodder 2020 Cochrane review are stated as reported in the Cochrane review*
CI: confidence interval; MD: mean difference
1 Very serious risk of bias in the evidence contributing to the outcomes as per RoB 2
2 Serious risk of bias in the evidence contributing to the outcomes as per RoB 2

Appendix G Economic evidence study selection

Study selection for: What interventions are effective to promote healthy eating and drinking practices, including complementary feeding, in children from 12 months to 5 years (in line with government advice)?

Error! Reference source not found. shows the flow diagram of the selection process for economic evaluations of interventions aiming to promote healthy eating and drinking practices, including complementary feeding, in children from 12 months to 5 years (in line with government advice).

Figure 62: Study selection flow chart



Appendix H Economic evidence tables

Economic evidence tables for review question: What interventions are effective to promote healthy eating and drinking practices, including complementary feeding, in children from 12 months to 5 years (in line with government advice)?

No economic evidence was identified which was applicable to this review question.

Appendix I Economic model

Economic model for review question: What interventions are effective to promote healthy eating and drinking practices, including complementary feeding, in children from 12 months to 5 years (in line with government advice)?

No economic analysis was conducted for this review question.

Appendix J Excluded studies

Excluded studies for review question: What interventions are effective to promote healthy eating and drinking practices, including complementary feeding, in children from 12 months to 5 years (in line with government advice)?

Effectiveness studies

The excluded studies table only lists the studies that were considered and then excluded at the full-text stage for this review (n=556) and not studies (n=25) that were considered and then excluded from the search at the full-text stage as per the PRISMA diagram in Appendix C for the other review questions in the same search.

Table 56: Excluded studies and reasons for their exclusion

Study	Code [Reason]
(2012) Effectiveness of an Information, Motivation, Behavior (IMB)-based Theoretical Model for Reducing Sugar-Sweetened Beverage (SSB) Consumption in Preschool Children. Journal of Nutrition Education & Behavior 44(4supplement): 83-s83	- Conference abstract
(2012) P126 The Snack Pack Project: A Preschool Food and Nutrition Education Program. Journal of Nutrition Education & Behavior 44(4supplement): 73-4	- Conference abstract
Ahern, Sara M., Caton, Samantha J., Blundell, Pam et al. (2014) The root of the problem: increasing root vegetable intake in preschool children by repeated exposure and flavour flavour learning. Appetite 80: 154-60	- Ineligible study design *Non RCT. Within subjects design*
Ahern, Sara M., Caton, Samantha J., Blundell-Birtill, Pam et al. (2019) The effects of repeated exposure and variety on vegetable intake in pre-school children. Appetite 132: 37-43	- Ineligible intervention *Included in Hodder 2020 but intervention involved exposure either to single vegetable snacks (baby sweet corn, celery or red pepper) or mixed vegetable snacks (mix of 5 vegetables), which does not match protocol criteria.*
Al Khalifah, R.A., Mok, E., Legault, L. et al. (2016) Using '5, 2, 1, 0' to promote healthy active living among school-age children attending a paediatric resident clinic: A prospective study. Paediatrics and Child Health (Canada) 21(5): e43-e47	- Ineligible study design *Cohort study involving children aged 5 to 16 years*

Study	Code [Reason]
Alkon, A., Crowley, A.A., Neelon, S.E. et al. (2014) Nutrition and physical activity randomized control trial in child care centers improves knowledge, policies, and children's body mass index. BMC public health 14: 215	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Aloia, CR, Shockey, TA, Nahar, VK et al. (2016) Pertinence of the recent school-based nutrition interventions targeting fruit and vegetable consumption in the United States:a systematic review. Health promotion perspectives 6(1): 1-9	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Studies were excluded because they were non-RCT or had a mean population age > 5 years*
Ammerman, A.S., Lindquist, C.H., Lohr, K.N. et al. (2002) The efficacy of behavioral interventions to modify dietary fat and fruit and vegetable intake: A review of the evidence. Preventive Medicine 35(1): 25-41	- Systematic review. Included studies checked for eligibility. *Studies included populations >5 years including adults, children with medical conditions requiring specific diets for example diabetes or domain studied not relevant to review for example cholesterol levels*
Ammerman, Alice S., Ward, Dianne S., Benjamin, Sara E. et al. (2007) An intervention to promote healthy weight: Nutrition and Physical Activity Self-Assessment for Child Care (NAP SACC) theory and design. Preventing chronic disease 4(3): a67	- No outcomes of interest *Describes the design of the study*
Anderson, A. S., Porteous, L. E. G., Foster, E. et al. (2005) The impact of a school-based nutrition education intervention on dietary intake and cognitive and attitudinal variables relating to fruits and vegetables. Public health nutrition 8(6): 650-6	- Ineligible population *Included year 2 (6-7 years) and year 7 (10-11 years) children*
Anonymous. (2007) Effective dietary interventions for managing overweight and obesity in children. Nursing New Zealand (Wellington, N.Z. : 1995) 13(5): 30-31	- Ineligible study design *Not an intervention study*
Anonymous. (2014) Erratum to Family Ties to Health Program: A Randomized Intervention to Improve Vegetable Intake in Children [Journal of Nutrition Education and Behavior, (2012), 44, 166-171] Doi:10.1016/j.jneb.2011.06.009. Journal of Nutrition Education and Behavior 46(3): 1	- Ineligible study design *Correction to an existing study*

Study	Code [Reason]
Anonymous. (2004) School anti-"fizzy drinks" programme helps to prevent obesity in children. Evidence-Based Healthcare and Public Health 8(6): 368-369	- Ineligible population *Included children aged 7 and 11 years*
Antwi, Flora, Fazylova, Natalya, Garcon, Marie-Carmel et al. (2012) The effectiveness of web-based programs on the reduction of childhood obesity in school-aged children: A systematic review. JBI library of systematic reviews 10(42suppl): 1-14	- Ineligible study design *Review protocol*
Anzman-Frasca, S., Braun, A.C., Ehrenberg, S. et al. (2018) Effects of a randomized intervention promoting healthy children's meals on children's ordering and dietary intake in a quick-service restaurant. Physiology and Behavior 192: 109-117	- Ineligible population *Included children 4 to 8 years. Mean age 6.6 years*
Anzman-Frasca, Stephanie, Savage, Jennifer S., Marini, Michele E. et al. (2012) Repeated exposure and associative conditioning promote preschool children's liking of vegetables. Appetite 58(2): 543-53	- Ineligible intervention *Included in Hodder 2020 but intervention does not meet protocol criteria for this review. Intervention is exposure to vegetable with dip versus without dip*
Appleton, Katherine, Hemingway, Ann, Saulais, Laure et al. (2016) Increasing vegetable intakes: rationale and systematic review of published interventions. European Journal of Nutrition 55(3): 869-896	- Systematic review. Included studies checked for eligibility. *Individual studies relevant to the review have been included as individual studies or are included in Hodder 2020*
Arikpo, Dachi, Edet, Ededet Sewanu, Chibuzor, Moriam T et al. (2018) Educational interventions for improving primary caregiver complementary feeding practices for children aged 24 months and under. Cochrane Database of Systematic Reviews 5: cd011768	- Systematic review. Included studies checked for eligibility. *Individual studies relevant to the review have been included as individual studies or are included in Hodder 2020. Other studies were excluded because they were conducted in low-and-middle income countries or included infants <12 months and follow-up did not continue after 12 months of age*
Arredondo, Elva M., Ayala, Guadalupe X., Soto, Sandra et al. (2018) Latina mothers as agents of change in children's eating habits: findings from the randomized controlled trial Entre Familia: Reflejos de Salud. International Journal of Behavioral Nutrition & Physical Activity 15(1): npag-npag	- Ineligible population *Participants included children aged 7 to 13 years*

Study	Code [Reason]
Au, L.E., Whaley, S., Rosen, N.J. et al. (2016) Online and In-Person Nutrition Education Improves Breakfast Knowledge, Attitudes, and Behaviors: A Randomized Trial of Participants in the Special Supplemental Nutrition Program for Women, Infants, and Children. Journal of the Academy of Nutrition and Dietetics 116(3): 490-500	- Ineligible population *Study focused on an adult population ≥18 years*
Auld, GW, Romaniello, C, Heimendinger, J et al. (1998) Outcomes from a school-based nutrition education program using resource teachers and cross-disciplinary models. Journal of Nutrition Education 30(5): 268-280	- Ineligible study design *Quasi-experimental design*
Avery, A; Bostock, L; McCullough, F (2015) A systematic review investigating interventions that can help reduce consumption of sugar-sweetened beverages in children leading to changes in body fatness. Journal of human nutrition and dietetics : the official journal of the British Dietetic Association 28suppl1: 52-64	- Systematic review. Included studies checked for eligibility. *Studies included in the review had populations >5 years*
Azevedo, L.B., Stephenson, J., Ells, L. et al. (2022) The effectiveness of e-health interventions for the treatment of overweight or obesity in children and adolescents: A systematic review and meta-analysis. Obesity Reviews 23(2): e13373	- Systematic review. Included studies checked for eligibility. *Eleven studies in age range 3 - 11 years. No additional studies identified for inclusion*
Bakırcı-Taylor, AL, Reed, DB, McCool, B et al. (2019) mHealth Improved Fruit and Vegetable Accessibility and Intake in Young Children. Journal of nutrition education and behavior 51(5): 556-566	- No analysable data *Included in Hodder 2020, but no analysable data relevant to outcomes of interest*
Baltaci, A, Hurtado Choque, GA, Davey, C et al. (2022) P116 Intervention and Modifier Effects of a Randomized Controlled Trial on Latino Paternal Food and Activity Parenting Practices...Society for Nutrition Education and Behavior Annual Conference, 29-31 July, 2022, Atlanta, Georgia. Journal of nutrition education and behavior 54(7): 73	- Conference abstract
Banerjee, T and Nayak, A (2017) Believe it or not: health education works. Obesity research & clinical practice 12(1): 116-124	- Ineligible population *Study focused on an adult population. Population included participants >25 years and outcomes were not measured in children.*

Study	Code [Reason]
Banna, J, Campos, M, Gibby, C et al. (2017) Multi-site trial using short mobile messages (SMS) to improve infant weight in low-income minorities: development, implementation, lessons learned and future applications. Contemporary clinical trials 62: 56-60	- Ineligible population *Study population included parents/caregivers of infants aged 0-2 months and outcomes were measured after 4 months when infants remained <12 months of age*
Bannon, K and Schwartz, MB (2006) Impact of nutrition messages on children's food choice: pilot study. Appetite 46(2): 124-129	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Baranowski, T, Baranowski, J, Cullen, KW et al. (2003) Squire's Quest! Dietary outcome evaluation of a multimedia game. American journal of preventive medicine 24(1): 52-61	- Ineligible population *4th grade students*
Barends, Coraline, de Vries, Jeanne H. M., Mojet, Jos et al. (2014) Effects of starting weaning exclusively with vegetables on vegetable intake at the age of 12 and 23 months. Appetite 81: 193-9	- Ineligible intervention *Included in Hodder 2020 but intervention does not meet protocol criteria for this review. Intervention involved exposure to fruit versus exposure to vegetable*
Barkin, S.L., Gesell, S.B., Po'e, E.K. et al. (2012) Culturally tailored, family-centered, behavioral obesity intervention for Latino-American preschool-aged children. Pediatrics 130(3): 445-456	- Ineligible intervention *Intervention included diet and physical activity components and outcomes (BMI) reported in children were not solely diet-related. Population included children aged 2-6 years*
Barkin, S.L., Heerman, W.J., Sommer, E.C. et al. (2018) Effect of a behavioral intervention for underserved preschool-age children on change in body mass index: A randomized clinical trial. JAMA - Journal of the American Medical Association 320(5): 450-460	- No outcomes of interest *BMI outcome reported but intervention had both diet and physical activity components*
Barnes, C., Grady, A., Nathan, N. et al. (2020) A pilot randomised controlled trial of a web-based implementation intervention to increase child intake of fruit and vegetables within childcare centres. Pilot and Feasibility Studies 6(1): 163	- Ineligible study design *Description of study methodology*
Barnes, C., Hall, A., Nathan, N. et al. (2021) Efficacy of a school-based physical activity and nutrition intervention on child weight status: Findings from a cluster randomized controlled trial. Preventive Medicine 153: 106822	- Ineligible population *Population included children aged 5 to 12 years and results were not separated by age. Outcomes only reported in Grades 4 to 6 children*

Study	Code [Reason]
Bartholomew, JB and Jowers, EM (2006) Increasing frequency of lower-fat entrees offered at school lunch: an environmental change strategy to increase healthful selections. Journal of the American Dietetic Association 106(2): 248-252	- Ineligible population *Whole school population. No age reported*
Bartholomew, John B. and Jowers, Esbelle M. (2006) Increasing frequency of lower-fat entrees offered at school lunch: an environmental change strategy to increase healthful selections. Journal of the American Dietetic Association 106(2): 248-52	- Ineligible population *Whole school population. No age reported*
Basak, S, Steinberg, A, Campbell, A et al. (2019) All Aboard Meal Train: can Child-Friendly Menu Labeling Promote Healthier Choices in Hospitals?. Journal of pediatrics 204: 59-65.e3	- Ineligible population *Study included children >2 years to >10 years but did not separate findings by age. Mean age 9.9 years*
Baskale, H and Bahar, Z (2011) Outcomes of nutrition knowledge and healthy food choices in 5- to 6-year-old children who received a nutrition intervention based on Piaget's theory. Journal for specialists in pediatric nursing: JSPN 16(4): 263-279	- Ineligible country *Not a high income country (defined by the OECD) as specified in the protocol.*
Bayer, O, von Kries, R, Strauss, A et al. (2009) Short- and mid-term effects of a setting based prevention program to reduce obesity risk factors in children: a cluster-randomized trial. Clinical nutrition (Edinburgh, Scotland) 28(2): 122-128	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Beasley, Jeannette M, Wagnild, Janelle M, Pollard, Tessa M et al. (2020) Effectiveness of diet and physical activity interventions among Chinese-origin populations living in high income countries: a systematic review. BMC public health 20(1): 1019	- Systematic review. Included studies checked for eligibility. *Review included a mixed population of children and adults. Individual studies relevant to the review have been included as individual studies or are included in Hodder 2020.*
Beck, A.L., Fernandez, A., Rojina, J. et al. (2017) Randomized Controlled Trial of a Clinic-Based Intervention to Promote Healthy Beverage Consumption among Latino Children. Clinical Pediatrics 56(9): 838-844	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Bell, A Colin, Davies, Lynda, Finch, Meghan et al. (2015) An implementation intervention to	- Ineligible study design

Study	Code [Reason]
encourage healthy eating in centre-based child-care services: impact of the Good for Kids Good for Life programme. Public health nutrition 18(9): 1610-9	*Quasi-experimental study design*
Bell, Lucinda K, Gardner, Claire, Tian, Esther J et al. (2021) Supporting strategies for enhancing vegetable liking in the early years of life: an umbrella review of systematic reviews. American Journal of Clinical Nutrition 113(5): 1282-1300	- Systematic review. Included studies checked for eligibility. *Umbrella review including 11 SRs. Included SRs fall within the same date range as Hodder 2020.*
Bender, Melinda S., Nader, Philip R., Kennedy, Christine et al. (2013) A culturally appropriate intervention to improve health behaviors in Hispanic mother-child dyads. Childhood obesity (Print) 9(2): 157-63	- Ineligible study design *Pre-test post-test design. No control group*
Benjamin, Sara E., Ammerman, Alice, Sommers, Janice et al. (2007) Nutrition and physical activity self-assessment for child care (NAP SACC): results from a pilot intervention. Journal of nutrition education and behavior 39(3): 142-9	- Ineligible study design *Not a randomised controlled trial*
Bere, E., te Velde, S.J., Smastuen, M.C. et al. (2015) One year of free school fruit in Norway - 7 years of follow-up. International Journal of Behavioral Nutrition and Physical Activity 12(1): 139	- Ineligible population *Study focused on the whole elementary school population*
Berezowitz, Claire K; Bontrager Yoder, Andrea B; Schoeller, Dale A (2015) School Gardens Enhance Academic Performance and Dietary Outcomes in Children. The Journal of school health 85(8): 508-18	- Systematic review. Included studies checked for eligibility. *Reviewed studies had population of school children > 5 years (first to seventh grade students)*
Berry, Diane, Colindres, Melida, Sanchez-Lugo, Lizette et al. (2011) Adapting, Feasibility Testing, and Pilot Testing a Weight Management Intervention for Recently Immigrated Spanish-Speaking Women and Their 2- to 4-Year-Old Children. Hispanic Health Care International (Springer Publishing Company, Inc.) 9(4): 186-193	- Ineligible intervention *Intervention included diet and physical activity components and outcome reported in children (BMI percentile) were not solely diet-related*
Birch, Leann Lipps (1980) Effects of peer models' food choices and eating behaviors on	- Ineligible study design *Non-randomised controlled trial*

Study	Code [Reason]
preschoolers' food preferences. Child development: 489-496	
Black, A.P., D'Onise, K., McDermott, R. et al. (2017) How effective are family-based and institutional nutrition interventions in improving children's diet and health? A systematic review. BMC public health 17(1): 818	- Systematic review. Included studies checked for eligibility. *Individual studies relevant to the review have been included as individual studies or are included in Hodder 2020. Excluded studies was mainly because they had a population >5 years*
Black, Maureen M., Hurley, Kristen, Wang, Yan et al. (2013) Toddler Obesity Prevention Study (TOPS) increases toddler health-promoting behaviors. The FASEB Journal 27(s1): 37.4-37.4	- Domain not of interest *Focus on obesity prevention*
Black, Maureen M, Hurley, Kristen M, Hager, Erin R et al. (2011) Toddler obesity prevention: effects of parenting and maternal lifestyles interventions. Obesity 19: S109-S109	- Domain not of interest *Focus on obesity prevention*
Bleich, S.N., Segal, J., Wu, Y. et al. (2013) Systematic review of community-based childhood obesity prevention studies. Pediatrics 132(1): e201-e210	- Systematic review. Included studies checked for eligibility. *Individual studies are not eligible for this review either because the population do not meet the inclusion criteria, or the study design is not a RCT (2 studies: Chang 2010 and de Silva-Sanigorski 2010)*
Blom-Hoffman, Jessica, Kelleher, Constance, Power, Thomas J. et al. (2004) Promoting healthy food consumption among young children: Evaluation of a multi-component nutrition education program. Journal of School Psychology 42(1): 45-60	- Ineligible study design *Not RCT*
Blom-Hoffman, Jessica, Wilcox, Kaila R., Dunn, Liam et al. (2008) Family Involvement in School-Based Health Promotion: Bringing Nutrition Information Home. School psychology review 37(4): 567-577	- Ineligible population *Included children in kindergarten or first grade with mean age of 6.22 years (experimental group) and 6.21 years (control group)*
Bocca, G., Corpeleijn, E., van den Heuvel, E.R. et al. (2014) Three-year follow-up of 3-year-old to 5-year-old children after participation in a multidisciplinary or a usual-care obesity treatment program. Clinical Nutrition 33(6): 1095-1100	- No outcomes of interest *Intervention included diet and physical activity components and outcomes reported in children were not solely diet-related such as BMI. Other diet related outcomes reported include energy intake, saturated fats, carbohydrates etc*

Study	Code [Reason]
Bocca, G, Kuitert, MWB, Sauer, PJJ et al. (2018) Effect of a multidisciplinary treatment program on eating behavior in overweight and obese preschool children. Journal of pediatric endocrinology & metabolism 31(5): 507-513	- Ineligible intervention *Intervention combined nutritional advice and physical activity and was focused on improving eating behaviours (restrained, emotional or external) in preschool children*
Bonuck, Karen, Avraham, Sivan Ben, Lo, Yungtai et al. (2014) Bottle-weaning intervention and toddler overweight. The Journal of pediatrics 164(2): 306-2	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Bouhlal, Sofia, Issanchou, Sylvie, Chabanet, Claire et al. (2014) 'Just a pinch of salt'. An experimental comparison of the effect of repeated exposure and flavor-flavor learning with salt or spice on vegetable acceptance in toddlers. Appetite 83: 209-217	- Ineligible study design *Non-randomised controlled trial. Between-subjects design*
Bouhlal, Sofia; Issanchou, Sylvie; Nicklaus, Sophie (2011) The impact of salt, fat and sugar levels on toddler food intake. The British journal of nutrition 105(4): 645-53	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Bourke, M.; Whittaker, P.J.; Verma, A. (2014) Are dietary interventions effective at increasing fruit and vegetable consumption among overweight children? A systematic review. Journal of epidemiology and community health 68(5): 485-490	- Systematic review. Included studies checked for eligibility. *No additional study identified for inclusion. Studies lumped together children from ages 4 to 12 years*
Briefel, Ronette, Chojnacki, Gregory, Gabor, Vivian et al. (2019) Evaluation of Demonstration Projects to End Childhood Hunger (EDECH): The Chickasaw Nation Packed Promise Project. Food and Nutrition Service.: 394	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Briley, Margaret E., Ranjit, Nalini, Hoelscher, Deanna M. et al. (2012) Unbundling outcomes of a multilevel intervention to increase fruit, vegetables, and whole grains parents pack for their preschool children in sack lunches. American journal of health education 43(3): 135-142	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Brown, A., Sutherland, R., Janssen, L. et al. (2021) Enhancing the potential effects of text messages delivered via an m-health intervention to improve packing of healthy school	- Ineligible population *Study lumped together children in Kindergarten to grade 6 (Mean age 7.99).*

Study	Code [Reason]
lunchboxes. Public health nutrition 24(10): 2867-2876	
Brown, T, Moore, THM, Hooper, L et al. (2019) Interventions for preventing obesity in children. Cochrane Database of Systematic Reviews	- Domain not of interest *Focused on obesity which is outside the remit of this guideline*
Brown, T and Summerbell, C (2009) Systematic review of school-based interventions that focus on changing dietary intake and physical activity levels to prevent childhood obesity: an update to the obesity guidance produced by the National Institute for Health and Clinical Excellence. Obesity reviews : an official journal of the International Association for the Study of Obesity 10(1): 110-41	- Systematic review. Included studies checked for eligibility. *Review focused on obesity which is outside the remit of this guideline*
Bruhn, J. G. and Parcel, G. S. (1982) Preschool health education program (PHEP): an analysis of baseline data. Health education quarterly 9(23): 116-29	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Burchett, Helen (2003) Increasing fruit and vegetable consumption among British primary schoolchildren: a review. Health Education	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Studies included within the review had populations >5 years of age*
Burgi F, Niederer I, Schindler C et al. (2012) Effect of a lifestyle intervention on adiposity and fitness in socially disadvantaged subgroups of preschoolers: a cluster-randomized trial (Ballabeina). Prev. Med.: 335-340	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Burrows, T.; Janet, W.M.; Collins, C.E. (2011) Long-term changes in food consumption trends in overweight children in the HIKCUPS intervention. Journal of Pediatric Gastroenterology and Nutrition 53(5): 543-547	- Ineligible population *Children aged 5-9 (Mean = 8) years*
Burrows, T., Warren, J.M., Baur, L.A. et al. (2008) Impact of a child obesity intervention on dietary intake and behaviors. International Journal of Obesity 32(10): 1481-1488	- Ineligible population *Included parent of children aged 5 to 9 (Mean age 8) years*
Burrows, T, Morgan, PJ, Lubans, DR et al. (2012) Dietary outcomes of the healthy dads healthy kids randomised controlled trial. Journal	- Ineligible population

Study	Code [Reason]
of pediatric gastroenterology and nutrition 55(4): 408-411	*Population included children 5 -12 (mean 8.3 control, 8.7 intervention) years and findings were not stratified by age*
Buscail, C., Margat, A., Petit, S. et al. (2018) Fruits and vegetables at home (FLAM): a randomized controlled trial of the impact of fruits and vegetables vouchers in children from low-income families in an urban district of France. BMC public health 18(1): 1065	- Ineligible population *Target population was children aged 3 to 10 (Mean 6.8 control, 8.1 intervention) years and results were not presented separately by age*
Buyuktuncer, Z., Kearney, M., Ryan, C. L. et al. (2014) Fruit and vegetables on prescription: a brief intervention in primary care. Journal of Human Nutrition & Dietetics: 186-193	- Ineligible population *Study included patients >16 years*
Byrd-Bredbenner, C., Martin-Biggers, J., Povis, G.A. et al. (2018) Promoting healthy home environments and lifestyles in families with preschool children: HomeStyles, a randomized controlled trial. Contemporary Clinical Trials 64: 139-151	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Byrne R, Yeo MEJ, Mallan K et al. (2018) Is higher formula intake and limited dietary diversity in Australian children at 14 months of age associated with dietary quality at 24 months? . Appetite: 240-5	- Ineligible study design *Not an intervention study. Secondary analysis of the control group of the NOURISH trial*
Byrne, E and Nitzke, S (2002) Preschool children's acceptance of a novel vegetable following exposure to messages in a storybook. Journal of nutrition education and behavior 34(4): 211-213	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Cabili, C., Briefel, R., Forrestal, S. et al. (2021) A Cluster Randomized Controlled Trial of a Home-Delivered Food Box on Children's Diet Quality in the Chickasaw Nation Packed Promise Project. Journal of the Academy of Nutrition and Dietetics 121(1): 59-s69	- Ineligible population *Study lumped children of all ages up to 18 years together and did not separate results by age. No mean age reported*
Calvo-Malvar, M., Benitez-Estevez, A.J., Leis, R. et al. (2021) Changes in dietary patterns through a nutritional intervention with a traditional Atlantic diet: The galiat randomized controlled trial. Nutrients 13(12): 4233	- Ineligible population *Study is focused on an adult population aged 18 to 85 years*

Study	Code [Reason]
Cameron, AJ, Ball, K, Hesketh, KD et al. (2014) Variation in outcomes of the Melbourne Infant, Feeding, Activity and Nutrition Trial (InFANT) Program according to maternal education and age. Preventive medicine 58: 58-63	- No outcomes of interest
Campbell, K.J. and Hesketh, K.D. (2007) Strategies which aim to positively impact on weight, physical activity, diet and sedentary behaviours in children from zero to five years. A systematic review of the literature. Obesity Reviews 8(4): 327-338	- Systematic review. Included studies checked for eligibility. *No additional studies identified. Studies were excluded because they were non randomised controlled trials or are already included in the review*
Campbell, KJ, Lioret, S, McNaughton, SA et al. (2013) A parent-focused intervention to reduce infant obesity risk behaviors: a randomized trial. Pediatrics 131(4): 652-660	- Domain not of interest *Study is focused on obesity which is outside the remit of this guideline*
Carney, Elizabeth M., Stein, Wendy M., Reigh, Nicole A. et al. (2018) Increasing flavor variety with herbs and spices improves relative vegetable intake in children who are propylthiouracil (PROP) tasters relative to nontasters. Physiology & behavior 188: 48-57	- Ineligible intervention *Included in Hodder 2020 but intervention involved a offering vegetables with a variety of herbs and spices versus no variety of herbs and spices*
Cason, K. L. (2001) Evaluation of a preschool nutrition education program based on the theory of multiple intelligences. Journal of nutrition education 33(3): 161-4	- Ineligible study design *Non-randomised controlled trial*
Caton, Samantha J., Ahern, Sara M., Remy, Eloise et al. (2013) Repetition counts: repeated exposure increases intake of a novel vegetable in UK pre-school children compared to flavour-flavour and flavour-nutrient learning. The British journal of nutrition 109(11): 2089-97	- No analysable data *Included on Hodder 2020 but data not presented for comparison of interest (repeated exposure versus control). Data only presented for all intervention groups as a whole versus control*
Chai, LK, Collins, CE, May, C et al. (2021) Feasibility and efficacy of a web-based family telehealth nutrition intervention to improve child weight status and dietary intake: a pilot randomised controlled trial. Journal of telemedicine and telecare 27(3): 146-158	- Ineligible population *Population included children aged 4 to 11 (Mean 9± 2.3) years and results were not presented separately by age*
Chambers, T; Segal, A; Sassi, F (2021) Interventions using behavioural insights to influence children's diet-related outcomes: A systematic review. Obesity reviews : an official	- Systematic review. Included studies checked for eligibility.

Study	Code [Reason]
journal of the International Association for the Study of Obesity 22(2): e13152	*Review had a combined population of children < 18 years. Individual studies relevant to the review have been included as individual studies or are included in Hodder 2020*
Chan, C.L.; Tan, P.Y.; Gong, Y.Y. (2022) Evaluating the impacts of school garden-based programmes on diet and nutrition-related knowledge, attitudes and practices among the school children: a systematic review. BMC public health 22(1): 1251	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Individual studies relevant to the review have been included as individual studies or are included in Hodder 2020*
Chiang, W.L.; Azlan, A.; Mohd Yusof, B.N. (2022) Effectiveness of education intervention to reduce sugar-sweetened beverages and 100% fruit juice in children and adolescents: a scoping review. Expert Review of Endocrinology and Metabolism 17(2): 179-200	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Individual studies relevant to the review have been included as individual studies or are included in Hodder 2020*
Christian, M.S., Evans, C.E., Ransley, J.K. et al. (2012) Process evaluation of a cluster randomised controlled trial of a school-based fruit and vegetable intervention: Project Tomato. Public health nutrition 15(3): 459-465	- Ineligible population *Target population included the whole school and some year 3 focused intervention. Average age was 7.0*
Ciliska, D, Miles, E, O'Brien, MA et al. (1999) The effectiveness of community interventions to increase fruit and vegetable consumption in people four years of age and older Dundas. ON, Canada	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Studies fall within the same date range as Hodder 2020*
Ciliska, Donna, Miles, Elizabeth, O'brien, Mary Ann et al. (2000) Effectiveness of Community-Based Interventions to Increase Fruit and Vegetable Consumption. Journal of Nutrition Education 32(6): 341-352	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Individual studies relevant to the review have been included as individual studies or are included in Hodder 2020*
Cockroft, J E, Durkin, M, Masding, C et al. (2005) Fruit and vegetable intakes in a sample of pre-school children participating in the 'Five for All' project in Bradford. Public health nutrition 8(7): 861-9	- Ineligible study design *Not an intervention study*
Cooper, N. and Jones, C. (2011) Improving the quality of packed lunches in primary school	- Conference abstract

Study	Code [Reason]
children. Journal of Human Nutrition & Dietetics 24(4): 384-385	
Correia, DC, O'Connell, M, Irwin, ML et al. (2014) Pairing vegetables with a liked food and visually appealing presentation: promising strategies for increasing vegetable consumption among preschoolers. Childhood obesity (Print) 10(1): 72-76	- Ineligible intervention *Included in Hodder 2020 but intervention does not meet protocol criteria. Intervention involved pairing vegetables with liked food or enhancing visual appeal of food*
Corsini, Nadia, Slater, Amy, Harrison, Adam et al. (2013) Rewards can be used effectively with repeated exposure to increase liking of vegetables in 4-6-year-old children. Public health nutrition 16(5): 942-51	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Cosbey, Joanna and Muldoon, Deirdre (2017) EAT-UP™ Family-Centered Feeding Intervention to Promote Food Acceptance and Decrease Challenging Behaviors: A Single-Case Experimental Design Replicated Across Three Families of Children with Autism Spectrum Disorder. Journal of Autism & Developmental Disorders 47(3): 564-578	- Ineligible study design *Case series involving 3 children aged 6 to 8 years and their parents*
Cotton, W., Dudley, D., Peralta, L. et al. (2020) The effect of teacher-delivered nutrition education programs on elementary-aged students: An updated systematic review and meta-analysis. Preventive Medicine Reports 20: 101178	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Individual studies relevant to the review have been included as individual studies or are included in Hodder 2020*
Cottrell, L., Spangler-Murphy, E., Minor, V. et al. (2005) A kindergarten cardiovascular risk surveillance study: CARDIAC-kinder. American Journal of Health Behavior 29(6): 595-606	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Coulthard, H, Williamson, I, Palfreyman, Z et al. (2018) Evaluation of a pilot sensory play intervention to increase fruit acceptance in preschool children. Appetite 120: 609-615	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Coulthard, Helen and Blissett, Jackie (2009) Fruit and vegetable consumption in children and their mothers. Moderating effects of child sensory sensitivity. Appetite 52(2): 410-5	- Ineligible study design *Cross-sectional study*

Study	Code [Reason]
Coulthard, Helen; Harris, Gillian; Fogel, Anna (2014) Exposure to vegetable variety in infants weaned at different ages. Appetite 78: 89-94	- Ineligible intervention *Included on Hodder 2020 but intervention does not meet protocol criteria. Intervention involved offering single vegetable versus variety of vegetables*
Crespo, N.C., Elder, J.P., Ayala, G.X. et al. (2012) Results of a multi-level intervention to prevent and control childhood obesity among Latino children: the Aventuras Para Ninos Study. Annals of behavioral medicine : a publication of the Society of Behavioral Medicine 43(1): 84-100	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Cullen, KW, Chen, TA, Dave, JM et al. (2015) Differential Improvements in Student Fruit and Vegetable Selection and Consumption in Response to the New National School Lunch Program Regulations: a Pilot Study. Journal of the Academy of Nutrition and Dietetics 115(5): 743-750	- Ineligible population *Participants included children in kindergarten to grade 8 and results were only separated into elementary school (Kindergarten to grade 5) and intermediate school (grades 6-8). Age not reported.*
Dabravolskaj, J., Montemurro, G., Ekwaru, J.P. et al. (2020) Effectiveness of school-based health promotion interventions prioritized by stakeholders from health and education sectors: A systematic review and meta-analysis. Preventive Medicine Reports 19: 101138	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Individual studies relevant to the review have been included as individual studies or are included in Hodder 2020. Studies were excluded because they had a mixed population with mean >5 years*
Daniels, LA, Mallan, KM, Battistutta, D et al. (2012) Evaluation of an intervention to promote protective infant feeding practices to prevent childhood obesity: outcomes of the NOURISH RCT at 14 months of age and 6 months post the first of two intervention modules. International journal of obesity (2005) 36(10): 1292-1298	- Included in Cochrane systematic review (Hodder 2020) *No additional outcomes reported*
Daniels L, Mallan K, Nicholson J et al. (2013) Child behaviour and weight outcomes of NOURISH RCT. Obesity Facts : 16	- Conference abstract
Daniels L, Mallan K, Nicholson J et al. (2014) Longer term child growth and maternal feeding practices outcomes of the NOURISH obesity prevention trial. Obesity Facts: 39	- Conference abstract

Study	Code [Reason]
Daniels LA. (2017) Complementary feeding in an obesogenic environment: behavioral and dietary quality outcomes and interventions. Nestle Nutrition Institute Workshop Series: 167-81	- Ineligible study design *Narrative literature review*
Daniels LA; Magarey AM; Nicholson JM (2011) The NOURISH early feeding trial: an innovative approach to child obesity prevention. Obesity Research and Clinical Practice : S5	- Conference abstract
Daniels, Lynne Allison, Mallan, Kimberley Margaret, Nicholson, Jan Maree et al. (2013) Outcomes of an early feeding practices intervention to prevent childhood obesity. Pediatrics 132(1): e109-18	- Included in Cochrane systematic review (Hodder 2020) *No additional outcomes reported*
Davison, Kirsten K, Jurkowski, Janine M, Li, Kaigang et al. (2013) A childhood obesity intervention developed by families for families: results from a pilot study. The international journal of behavioral nutrition and physical activity 10: 3	- Domain not of interest *Focused on obesity prevention which is outside the remit of this guideline*
Dazeley, P and Houston-Price, C (2015) Exposure to foods' non-taste sensory properties. A nursery intervention to increase children's willingness to try fruit and vegetables. Appetite 84: 1-6	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
De Bock, F.; Breitenstein, L.; Fischer, J.E. (2012) Positive impact of a pre-school-based nutritional intervention on children's fruit and vegetable intake: results of a cluster-randomized trial. Public health nutrition 15(3): 466-475	- No analysable data *Included in Hodder 2020 but not meta-analysed. Study data presented as figure, so unable to extract values*
De Droog SM. (2012) Using picture books to stimulate the appeal of healthy food products among pre-schoolers. Appetite 2(59): 624.	- Conference abstract
de Droog, S.M.; Valkenburg, P.M.; Buijzen, M. (2011) Using brand characters to promote young children's liking of and purchase requests for fruit. Journal of health communication 16(1): 79-89	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
de Droog, Simone M., van Nee, Roselinde, Govers, Mieke et al. (2017) Promoting toddlers'	- Included in Cochrane systematic review (Hodder 2020)

Study	Code [Reason]
vegetable consumption through interactive reading and puppetry. Appetite 116: 75-81	
de Droog, SM; Buijzen, M; Valkenburg, PM (2014) Enhancing children's vegetable consumption using vegetable-promoting picture books. The impact of interactive shared reading and character-product congruence. Appetite 73: 73-80	- Included in Cochrane systematic review (Hodder 2020)
de Sa, J. and Lock, K. (2007) School-based Fruit and Vegetable Schemes: A review of the Evidence.: 1-39	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Studies had populations > 5 years or were non-randomised studies*
de Sa, Joia and Lock, Karen (2008) Will European agricultural policy for school fruit and vegetables improve public health? A review of school fruit and vegetable programmes. The European Journal of Public Health 18(6): 558-568	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Studies were excluded because they included a population >5 years or were non-randomised studies*
de Silva-Sanigorski, Andrea M, Bell, A Colin, Kremer, Peter et al. (2010) Reducing obesity in early childhood: results from Romp & Chomp, an Australian community-wide intervention program. The American journal of clinical nutrition 91(4): 831-40	- Domain not of interest *Focused on obesity prevention which is outside the remit of this guideline*
de Silva-Sanigorski, Andrea, Prosser, Lauren, Carpenter, Lauren et al. (2010) Evaluation of the childhood obesity prevention program Kids--'Go for your life'. BMC public health 10: 288	- Domain not of interest *Focused on obesity prevention which is outside the remit of this guideline*
de Wild, V.; de Graaf, C.; Jager, G. (2015) Efficacy of repeated exposure and flavour-flavour learning as mechanisms to increase preschooler's vegetable intake and acceptance. Pediatric obesity 10(3): 205-12	- Included in Cochrane systematic review (Hodder 2020) - Ineligible intervention *Included in Hodder 2020 but intervention does not meet protocol criteria. Intervention focuses on pairing vegetables with different flavours*
de Wild, Victoire W. T., de Graaf, Cees, Boshuizen, Hendriek C. et al. (2015) Influence	- Ineligible intervention

Study	Code [Reason]
of choice on vegetable intake in children: an in-home study. Appetite 91: 1-6	*Included in Hodder 2020 but intervention does not meet protocol criteria for this review. Intervention was offering choice of 2 vegetables versus no choice*
de Wild, Victoire W. T.; de Graaf, Cees; Jager, Gerry (2013) Effectiveness of flavour nutrient learning and mere exposure as mechanisms to increase toddler's intake and preference for green vegetables. Appetite 64: 89-96	- Ineligible intervention *Included in Hodder 2020 but intervention does not meet protocol criteria. Intervention involves offering high energy versus low energy vegetable soups*
de Wild, Victoire WT; de Graaf, Cees; Jager, Gerry (2017) Use of different vegetable products to increase preschool-aged children's preference for and intake of a target vegetable: A randomized controlled trial. Journal of the Academy of Nutrition and Dietetics 117(6): 859-866	- No analysable data *Included in Hodder 2020 but was not meta-analysed. Study data on vegetable intake presented in figure, so unable to extract values*
Del Tredici, A. M., Joy, A. B., Omelich, C. L. et al. (1988) Evaluation study of the California Expanded Food and Nutrition Education Program: 24-hour food recall data. Journal of the American Dietetic Association 88(2): 185-90	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Delaney, T., Wyse, R., Yoong, S.L. et al. (2017) Cluster randomized controlled trial of a consumer behavior intervention to improve healthy food purchases from online canteens. American Journal of Clinical Nutrition 106(5): 1311-1320	- Ineligible population *Included whole school population aged 5 to 12 years. No mean age reported*
Delgado-Noguera, M, Tort, S, Martínez-Zapata, MJ et al. (2011) Primary school interventions to promote fruit and vegetable consumption: A systematic review and meta-analysis. Preventive medicine 53(12): 3-9	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Studies excluded because they had mixed population with mean > 5 years, ineligible population or non-randomised study*
Delisle Nyström, C, Sandin, S, Henriksson, P et al. (2018) A 12-month follow-up of a mobile-based (mHealth) obesity prevention intervention in pre-school children: the MINISTOP randomized controlled trial. BMC public health 18(1): 658	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Delisle, C., Sandin, S., Forsum, E. et al. (2015) A web- and mobile phone-based intervention to	- Ineligible intervention

Study	Code [Reason]
prevent obesity in 4-year-olds (MINISTOP): a population-based randomized controlled trial. BMC public health 15: 95	*Description of methodology and trial information*
DiSantis, KI, Birch, LL, Davey, A et al. (2013) Plate size and children's appetite: effects of larger dishware on self-served portions and intake. Pediatrics 131(5): e1451-8	- Conference abstract
Dixon, LB, McKenzie, J, Shannon, BM et al. (1997) The effect of changes in dietary fat on the food group and nutrient intake of 4- to 10-year-old children. Pediatrics 100(5): 863-872	- Ineligible population *Participants included children aged 4 to 10 years (Mean age between 6.8 group I, 6.5 group II, 6.3 group III, 6.5 group IV) and results were not presented separately by age*
Dodd, J.M.; Deussen, A.R.; Louise, J. (2020) Effects of an antenatal dietary intervention in women with obesity or overweight on child outcomes at 3-5 years of age: LIMIT randomised trial follow-up. International Journal of Obesity 44(7): 1531-1535	- Ineligible intervention *Intervention was delivered in the antenatal period*
Dollahite, J, Hosig, KW, White, KA et al. (1998) Impact of a school-based community intervention program on nutrition knowledge and food choices in elementary school children in the rural Arkansas delta. Journal of nutrition education 30(5): 289-301	- Ineligible population *Study had population of kindergarten to grade 5 students with no indication of their ages. It is expected that kindergarten to grade 1 will have students aged 4 to 6 years and no results were presented for this population group.*
Doymaz, S and Neuspiel, DR (2009) The influence of pediatric resident counseling on limiting sugar-sweetened drinks in children. Clinical pediatrics 48(7): 777-779	- Ineligible population *Population included children aged 2 to 20 (Mean 8.34 intervention' 9.86 control) years and results were not stratified by age*
Driessen, CE, Cameron, AJ, Thornton, LE et al. (2014) Effect of changes to the school food environment on eating behaviours and/or body weight in children: a systematic review. Obesity reviews : an official journal of the International Association for the Study of Obesity 15(12): 968-82	- Conference abstract
Dudley, D.A.; Cotton, W.G.; Peralta, L.R. (2015) Teaching approaches and strategies that promote healthy eating in primary school children: A systematic review and meta-analysis. International Journal of Behavioral Nutrition and Physical Activity 12(1): 28	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Studies were excluded because they had an*

Study	Code [Reason]
	ineligible population or was a non-randomised study
Dumas, A.-A., Lemieux, S., Lapointe, A. et al. (2020) Effects of an Evidence-Informed Healthy Eating Blog on Dietary Intakes and Food-Related Behaviors of Mothers of Preschool- and School-Aged Children: A Randomized Controlled Trial. Journal of the Academy of Nutrition and Dietetics 120(1): 53-68	- Ineligible population *Study focused on mothers of children aged 2 to 12 years. Outcomes were in mothers, not children*
Duncanson, K.; Burrows, T.; Collins, C. (2011) Twelve Month Outcomes of the Feeding Healthy Food to Kids Randomised Controlled Trial. Journal of the American Dietetic Association 111(9): a105	- Conference abstract
Duncanson, K., Shrewsbury, V., Burrows, T. et al. (2021) Impact of weight management nutrition interventions on dietary outcomes in children and adolescents with overweight or obesity: a systematic review with meta-analysis. Journal of human nutrition and dietetics : the official journal of the British Dietetic Association 34(1): 147-177	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Studies included populations >5 years, or had mixed populations with mean age > 5 years*
Dunn, Carolyn, Thomas, Cathy, Ward, Dianne et al. (2006) Design and implementation of a nutrition and physical activity curriculum for child care settings. Preventing chronic disease 3(2): a58	- No outcomes of interest *Reports on the design and evaluation of a healthy eating curriculum*
Dwyer, JT, Hewes, LV, Mitchell, PD et al. (1996) Improving school breakfasts: effects of the CATCH Eat Smart Program on the nutrient content of school breakfasts. Preventive medicine 25(4): 413-422	- Ineligible population *Included whole school population with no age reported*
Earnesty, D, Alaimo, K, Ha, W et al. (2019) Generic Nutrition Education Intervention Does Not Increase Dietary Quality in Childcare Homes...Food & Nutrition Conference & Expo, 26-29 October 2019, Philadelphia, PA. Journal of the Academy of Nutrition and Dietetics 119(9): A-72	- Conference abstract
Eilat-Adar, S., Koren-Morag, N., Siman-Tov, M. et al. (2011) School-based intervention to promote eating daily and healthy breakfast: A	- Ineligible study design *Case-control study, and included children in 3rd and 4th grade.*

Study	Code [Reason]
survey and a case-control study. European Journal of Clinical Nutrition 65(2): 203-209	
Eliakim, A, Nemet, D, Balakirski, Y et al. (2007) The effects of nutritional-physical activity school-based intervention on fatness and fitness in preschool children. Journal of pediatric endocrinology & metabolism 20(6): 711-718	- Ineligible intervention *Intervention included diet and physical activity components and outcomes reported are not solely diet-related. Participants were children aged 5-6 years (mean 66 to 67 months)*
Ells, Louisa J, Rees, Karen, Brown, Tamara et al. (2018) Interventions for treating children and adolescents with overweight and obesity: an overview of Cochrane reviews. International journal of obesity (2005) 42(11): 1823-1833	- Systematic review. Included studies checked for eligibility. *Review focused on treatment of obesity including pharmacological interventions, surgery and behavioural interventions in a mixed population. No additional studies identified for inclusion.*
Epstein, L. H., Gordy, C. C., Raynor, H. A. et al. (2001) Increasing fruit and vegetable intake and decreasing fat and sugar intake in families at risk for childhood obesity. Obesity research 9(3): 171-8	- Ineligible population *Included children aged 6 to 11 years*
Evans, C E L; Greenwood, D C; Cade, J E (2010) 068 Systematic review and meta-analysis of school-based interventions to improve fruit and vegetable intake. Journal of Epidemiology & Community Health 64: 27-27	- Conference abstract
Evans, CE, Christian, MS, Cleghorn, CL et al. (2012) Systematic review and meta-analysis of school-based interventions to improve daily fruit and vegetable intake in children aged 5 to 12 y. The American journal of clinical nutrition 96(4): 889-901	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Studies were excluded either due to a combined population e.g ages 4-6 (Ransley 2007) or study focused on children >5 years*
Fagg, J., Chadwick, P., Cole, T.J. et al. (2014) From trial to population: A study of a family-based community intervention for childhood overweight implemented at scale. International Journal of Obesity 38(10): 1343-1349	- Ineligible population *Participants included children aged 7-13 years*
Faith, M.S., Cochran, W.C., Diewald, L. et al. (2021) Group lifestyle modification vs. lifestyle newsletters for early childhood obesity: Pilot study in rural primary care. Journal of Behavioral and Cognitive Therapy 31(3): 215-228	- Ineligible population *Mixed population of children 4 to 8 (Mean 6.8) years and results were not separated by age. Intervention included diet and physical activity*

Study	Code [Reason]
	components but reported outcomes of child feeding questionnaire (CFQ)
Fangupo, LJ, Heath, AL, Williams, SM et al. (2015) Impact of an early-life intervention on the nutrition behaviors of 2-y-old children: a randomized controlled trial. American journal of clinical nutrition 102(3): 704-712	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Farfan-Ramirez, Lucrecia, Diemoz, Lisa, Gong, Elizabeth J. et al. (2011) Curriculum Intervention in Preschool Children: Nutrition Matters!. Journal of Nutrition Education & Behavior 43(4supplement2): 162-5	- Ineligible study design *Non-randomised controlled trial*
Feng J., He, Yangfeng, Wu, Xiang-Xian, Feng et al. (2015) School based education programme to reduce salt intake in children and their families (School-EduSalt): cluster randomised controlled trial. BMJ: British Medical Journal 350(8000): h770-h770	- Ineligible population *Children in grade 5*
Feng, Du, Song, Huaxin, Esperat, M Christina et al. (2016) A Multicomponent Intervention Helped Reduce Sugar-Sweetened Beverage Intake in Economically Disadvantaged Hispanic Children. American journal of health promotion : AJHP 30(8): 594-603	- Ineligible population *Mixed population of children aged 5 to 9 (mean age 10.1) years and results were not separated by age*
Fernandez-Jimenez, R., Jaslow, R., Bansilal, S. et al. (2019) Child Health Promotion in Underserved Communities: The FAMILIA Trial. Journal of the American College of Cardiology 73(16): 2011-2021	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Fisher, Jennifer O., Mennella, Julie A., Hughes, Sheryl O. et al. (2012) Offering "dip" promotes intake of a moderately-liked raw vegetable among preschoolers with genetic sensitivity to bitterness. Journal of the Academy of Nutrition and Dietetics 112(2): 235-45	- Ineligible study design *Included in Hodder but study design is between-subjects, quasi experimental design*
Fisher, JO, Serrano, EL, Foster, GD et al. (2019) Title: efficacy of a food parenting intervention for mothers with low income to reduce preschooler's solid fat and added sugar intakes: a randomized controlled trial. International journal of behavioral nutrition and physical activity 16(1): 6	- Falls within the same date range as Cochrane systematic review (Hodder 2020)

Study	Code [Reason]
Fiske, Amy and Cullen, Karen Weber (2004) Effects of promotional materials on vending sales of low-fat items in teachers' lounges. Journal of the American Dietetic Association 104(1): 90-3	- Ineligible population *Focused on an adult population*
Fitzgibbon, M.L., Stolley, M.R., Avellone, M.E. et al. (1996) Involving parents in cancer risk reduction: a program for Hispanic American families. Health psychology : official journal of the Division of Health Psychology, American Psychological Association 15(6): 413-422	- Ineligible population *Included children 7 to 12 years*
Fitzgibbon, Marian L., Stolley, Melinda R., Schiffer, Linda et al. (2005) Two-year follow-up results for Hip-Hop to Health Jr.: a randomized controlled trial for overweight prevention in preschool minority children. The Journal of pediatrics 146(5): 618-25	- Domain not of interest *Study focused on obesity/overweight prevention which is outside the remit of this guideline*
Fitzgibbon, ML, Stolley, MR, Schiffer, L et al. (2013) Family-based hip-hop to health: outcome results. Obesity (Silver Spring, Md.) 21(2): 274-283	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Fitzgibbon, ML, Stolley, MR, Schiffer, L et al. (2006) Hip-Hop to Health Jr. for Latino preschool children. Obesity (Silver Spring, Md.) 14(9): 1616-1625	- No outcomes of interest *BMI outcome reported but study is focused on weight/BMI management and the intervention combined diet and physical activity elements. Diet related outcomes include total fat, saturated fat and dietary fibre intake which do not meet the inclusion criteria*
Fitzgibbon, ML, Stolley, MR, Schiffer, LA et al. (2011) Hip-Hop to Health Jr. Obesity Prevention Effectiveness Trial: postintervention results. Obesity (Silver Spring, Md.) 19(5): 994-1003	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Fitzpatrick, P.; Molloy, B.; Johnson, Z. (1997) Community mothers' programme: extension to the travelling community in Ireland. Journal of epidemiology and community health 51(3): 299-303	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Fletcher, A., Wolfenden, L., Wyse, R. et al. (2013) A randomised controlled trial and mediation analysis of the 'Healthy Habits', telephone-based dietary intervention for	- No outcomes of interest *Outcome was 'non-core food scores'*

Study	Code [Reason]
preschool children. The international journal of behavioral nutrition and physical activity 10: 43	
Foerster, Susan B, Gregson, Jennifer, Beall, Deborah Lane et al. (1998) The California Children's 5 a Day-Power Play! campaign: Evaluation of a large-scale social marketing initiative. Family & Community Health 21(1): 46-64	- Ineligible population *Included children 3rd to 6th grade*
Fogarty, A W, Antoniak, M, Venn, A J et al. (2007) Does participation in a population-based dietary intervention scheme have a lasting impact on fruit intake in young children?. International journal of epidemiology 36(5): 1080-5	- No outcomes of interest *Outcome measured at age 6-7 and 7-8 years*
Folta, S.C., Goldberg, J.P., Economos, C. et al. (2006) Assessing the use of school public address systems to deliver nutrition messages to children: Shape up Somerville - Audio adventures. Journal of School Health 76(9): 459-464	- Ineligible population *Unclear what the population is but study was conducted in elementary schools. Outcome was choice of beans from a variety*
Food Standards Agency, Great Britain. (2000) The Development and Evaluation of a Novel School-based Intervention to Increase Fruit and Vegetable Intake in Children.	- Ineligible population *Included children aged 6 to 7 years and 10 to 11 years*
Forestell CA and Mennella JA. (2007) Early determinants of fruit and vegetable acceptance. Pediatrics 6(120): 1247-54.	- Included in Cochrane systematic review (Hodder 2020) *Not included in this review because the intervention is not relevant.*
Franks, B., Lahlou, S., Bottin, J.H. et al. (2017) Increasing water intake in pre-school children with unhealthy drinking habits: A year-long controlled longitudinal field experiment assessing the impact of information, water affordance, and social regulation. Appetite 116: 205-214	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
French, G.M., Nicholson, L., Skybo, T. et al. (2012) An evaluation of mother-centered anticipatory guidance to reduce obesogenic infant feeding behaviors. Pediatrics 130(3): e507-e517	- Falls within the same date range as Cochrane systematic review (Hodder 2020)

Study	Code [Reason]
French, SA, Sherwood, NE, Veblen-Mortenson, S et al. (2018) Multicomponent Obesity Prevention Intervention in Low-Income Preschoolers: primary and Subgroup Analyses of the NET-Works Randomized Clinical Trial, 2012-2017. American journal of public health 108(12): 1695-1706	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
French, Simone A. and Stables, Gloria (2003) Environmental interventions to promote vegetable and fruit consumption among youth in school settings. Preventive medicine 37(6pt1): 593-610	- Systematic review. Included studies checked for eligibility. *Narrative review with included studies not meeting the review criteria. Included studies had populations >5 years or were non-randomised studies*
Gallotta, M.C., Iazzoni, S., Emerenziani, G.P. et al. (2016) Effects of combined physical education and nutritional programs on schoolchildren's healthy habits. PeerJ 2016(4): e1880	- Ineligible population *Study focused on grade 3 to 5 children (8 to 11 years)*
Ganann, R., Fitzpatrick-Lewis, D., Ciliska, D. et al. (2012) Community-based interventions for enhancing access to or consumption of fruit and vegetables among five to 18-year olds: a scoping review. BMC public health 12: 711	- Systematic review. Included studies checked for eligibility. *Scoping review focused on interventions targeted at 5 to 18 year olds. No additional studies identified for inclusion. Individual studies relevant to the review have been included as individual studies or are included in Hodder 2020*
Gato-Moreno, M., Martos-Lirio, M.F., Leiva-Gea, I. et al. (2021) Early nutritional education in the prevention of childhood obesity. International Journal of Environmental Research and Public Health 18(12): 6569	- Ineligible intervention *Intervention included diet and PA components and outcomes (BMI) reported are not solely diet-related*
Gay, JL, Saunders, RP, Rees-Punia, E et al. (2019) Role of Organizational Support on Implementation of an Environmental Change Intervention to Improve Child Fruit and Vegetable Intake: a Randomized Cross-Over Design. Prevention science 20(8): 1211-1218	- Ineligible population *Included children aged 11 to 18 years*
Gentile, DA, Welk, G, Eisenmann, JC et al. (2009) Evaluation of a multiple ecological level child obesity prevention program: switch what you Do, View, and Chew. BMC medicine 7: 49	- Ineligible population *Included children in 3rd to 5th grade which are likely to be within the 7 to 11 age range. Reported mean age was 9.6*

Study	Code [Reason]
Gerrish CJ and Mennella JA. (2001) Flavor variety enhances food acceptance in formula-fed infants. American Journal of Clinical Nutrition 6(73): 1080-5	- Included in Cochrane systematic review (Hodder 2020) *Not included in this review because intervention does not meet protocol criteria*
Gittelsohn, J., Vijayadeva, V., Davison, N. et al. (2010) A food store intervention trial improves caregiver psychosocial factors and childrens dietary intake in Hawaii. Obesity 18(suppl1): 84-s90	- Ineligible population *Included children aged 8-12 years*
Glasson, C., Chapman, K., Gander, K. et al. (2012) The efficacy of a brief, peer-led nutrition education intervention in increasing fruit and vegetable consumption: a wait-list, community-based randomised controlled trial. Public health nutrition 15(7): 1318-1326	- Ineligible population *Population was parents of children of primary school age without specifying the age of the children - unlikely they will be ≤ 5 years*
Golley, RK and Hendrie, GA (2012) The impact of replacing regular- with reduced-fat dairy foods on children's wider food intake: secondary analysis of a cluster RCT. European journal of clinical nutrition 66(10): 1130-1134	- Ineligible population *Included children aged 4 to 13 (Mean 8.6) years and results were not separated by age*
Gonçalves, Sónia, Ferreira, Rita, Conceição, Eva M. et al. (2018) The Impact of Exposure to Cartoons Promoting Healthy Eating on Children's Food Preferences and Choices. Journal of Nutrition Education & Behavior 50(5): 451-457	- Ineligible population *Includes children aged 4- 8 (mean 6.44) years and results were not separated by age. Outcomes included high fat foods, low energy density foods (e.g strawberries), high-carbs (e.g potatoes) etc*
Gorelick, Molly C. and Clark, E. Audrey (1985) Effects of a nutrition program on knowledge of preschool children. Journal of Nutrition Education 17(3): 88-92	- Ineligible study design *Non-randomised controlled trial*
Grant, J., Kotch, J., Quinonez, R. et al. (2010) Evaluation of knowledge, attitudes, and self-reported behaviors among 3-5 year old school children using an oral health and nutrition intervention. Journal of Clinical Pediatric Dentistry 35(1): 59-64	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Graziano, Paulo A; Garcia, Alexis; Lim, Crystal S (2017) Summer Healthy-Lifestyle Intervention Program for Young Children Who Are Overweight: Results from a Nonrandomized	- Ineligible study design *Non-randomised pilot trial*

Study	Code [Reason]
Pilot Trial. Journal of developmental and behavioral pediatrics : JDBP 38(9): 723-727	
Green, N. and Munroe, S. (1987) Evaluating nutrient-based nutrition education by nutrition knowledge and school lunch plate waste. School foodservice research review 11(2): 112-115	- Ineligible population *3rd grade students*
Gripshover, S.J. and Markman, E.M. (2013) Teaching Young Children a Theory of Nutrition: Conceptual Change and the Potential for Increased Vegetable Consumption. Psychological Science 24(8): 1541-1553	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Grummon, AH, Cabana, MD, Hecht, AA et al. (2019) Effects of a multipronged beverage intervention on young children's beverage intake and weight: a cluster-randomized pilot study. Public health nutrition 22(15): 2856-2867	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Hamel, L.M. and Robbins, L.B. (2013) Computer- and web-based interventions to promote healthy eating among children and adolescents: A systematic review. Journal of Advanced Nursing 69(1): 16-30	- Systematic review. Included studies checked for eligibility. *Review targeted children aged 6 to 11 years*
Hammersley, M.L., Okely, A.D., Batterham, M.J. et al. (2019) An Internet-Based Childhood Obesity Prevention Program (Time2bHealthy) for Parents of Preschool-Aged Children: Randomized Controlled Trial. Journal of medical Internet research 21(2): e11964	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Hammersley, M.L., Wyse, R.J., Jones, R.A. et al. (2021) Translation of two healthy eating and active living support programs for parents of 2-6-year-old children: Outcomes of the 'time for healthy habits' parallel partially randomised preference trial. Nutrients 13(10): 3348	- Ineligible study design *Parallel partially randomised preference trial design*
Hanks, AS; Just, DR; Brumberg, A (2016) Marketing Vegetables in Elementary School Cafeterias to Increase Uptake. Pediatrics 138(2)	- Ineligible population *Study targeted whole elementary school. No ages or grades specified*
Hannon, BA, Hammons, A, Musaad, SMA et al. (2019) P174 Improving Dietary Behaviors of Hispanic Children with a Family-Based Obesity Prevention Program: "Abriendo	- Conference abstract

Study	Code [Reason]
Caminos"...Society for Nutrition Education and Behavior 52nd Annual Conference, Nutrition Education: rooted in Food, July 27-30, 2019, Orlando, Florida. Journal of nutrition education and behavior 51: 111	
Hannon, James C. and Brown, Barbara B. (2008) Increasing preschoolers' physical activity intensities: an activity-friendly preschool playground intervention. Preventive medicine 46(6): 532-6	- Domain not of interest *Study focused on physical activity*
Hanson, K.L., Kolodinsky, J., Wang, W. et al. (2017) Adults and children in low-income households that participate in cost-offset community supported agriculture have high fruit and vegetable consumption. Nutrients 9(7): 726	- Ineligible study design *Not an intervention study. Study reports on a longitudinal survey of adults and children who participated in a community supported agriculture programme*
Hardy, Louise L., King, Lesley, Kelly, Bridget et al. (2010) Munch and Move: evaluation of a preschool healthy eating and movement skill program. The international journal of behavioral nutrition and physical activity 7: 80	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Hare, ME, Coday, M, Williams, NA et al. (2012) Methods and baseline characteristics of a randomized trial treating early childhood obesity: the Positive Lifestyles for Active Youngsters (Team PLAY) trial. Contemporary clinical trials 33(3): 534-549	- Ineligible study design *Presents an overview of methods of The Positive Lifestyles for Active Youngsters (Team PLAY) trial*
Harnack, Lisa J., Oakes, J. Michael, French, Simone A. et al. (2012) Results from an experimental trial at a Head Start center to evaluate two meal service approaches to increase fruit and vegetable intake of preschool aged children. The international journal of behavioral nutrition and physical activity 9: 51	- Included in Cochrane systematic review (Hodder 2020) *Not included in this review because intervention does not match protocol criteria. Intervention involves comparison between serving vegetable first as an entrée or provider portioned meals versus usual traditional family style meal service approach*
Harris, R, Gamboa, A, Dailey, Y et al. (2012) One-to-one dietary interventions undertaken in a dental setting to change dietary behaviour. Cochrane Database of Systematic Reviews	- Systematic review. Included studies checked for eligibility. *Included studies either had an adult population or children aged 11-16 years*
Hart, LM; Damiano, SR; Paxton, SJ (2016) Confident body, confident child: a randomized controlled trial evaluation of a parenting	- Falls within the same date range as Cochrane systematic review (Hodder 2020)

Study	Code [Reason]
resource for promoting healthy body image and eating patterns in 2- to 6-year old children. International journal of eating disorders 49(5): 458-472	
Harvey-Berino, J and Rourke, J (2003) Obesity prevention in preschool native-american children: a pilot study using home visiting. Obesity research 11(5): 606-611	- No outcomes of interest *Relevant outcome was BMI and intervention included information on diet and physical activity.*
Hasnin, Saima; Dev, Dipti A.; Tovar, Alison (2020) Participation in the CACFP Ensures Availability but not Intake of Nutritious Foods at Lunch in Preschool Children in Child-Care Centers. Journal of the Academy of Nutrition & Dietetics 120(10): 1722-1722	- Ineligible study design *Not an intervention study. Study assesses whether child care centres meet the CACFP requirements for feeding preschool children*
Hastings, Gerard, Stead, Martine, McDermott, Laura et al. (2003) Review Of Research On The Effects Of Food Promotion To Children. Glasgow: Centre for Social Marketing	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion*
Hausner, Helene; Olsen, Annemarie; Moller, Per (2012) Mere exposure and flavour-flavour learning increase 2-3 year-old children's acceptance of a novel vegetable. Appetite 58(3): 1152-9	- No analysable data *Included in Hodder 2020 but data not reported in analysable format. No data reported for control group*
Hearst, M.O., Kehm, R., Sherman, S. et al. (2014) Increasing fruit and vegetable consumption and offerings to Somali children: the FAV-S pilot study. Journal of primary care & community health 5(2): 139-143	- Ineligible population *Target population was children aged 3 to 10 years and results were not separated by age. Mean age not reported*
Hector, D., Edwards, S., Gale, J. et al. (2017) Achieving equity in Crunch&Sip: a pilot intervention of supplementary free fruit and vegetables in NSW classrooms. Health promotion journal of Australia : official journal of Australian Association of Health Promotion Professionals 28(3): 238-242	- Ineligible population *No indication of the age or class of the participants. Appears to be a whole school (primary) intervention.*
Hedrick, Valisa E., Davy, Brenda M., Porter, Kathleen J. et al. (2017) Dietary quality changes in response to a sugar-sweetened beverage-reduction intervention: results from the Talking Health randomized controlled clinical trial. American Journal of Clinical Nutrition 105(4): 824-833	- Ineligible population *Adults aged ≥18 years*

Study	Code [Reason]
Heerman, WJ, Teeters, L, Sommer, EC et al. (2019) Competency-Based Approaches to Community Health: a Randomized Controlled Trial to Reduce Childhood Obesity among Latino Preschool-Aged Children. Childhood obesity (Print) 15(8): 519-531	- Ineligible intervention *Main aim of intervention was to prevent/treat obesity and the intervention combined diet and physical activity*
Hendrie, G., Sohonpal, G., Lange, K. et al. (2013) Change in the family food environment is associated with positive dietary change in children. International Journal of Behavioral Nutrition and Physical Activity 10: 4	- Ineligible population *Included children aged 4 to 13 years. Mean age 8.9. Results not separated by age.*
Hendrie, G.A., Brindal, E., Baird, D. et al. (2013) Improving children's dairy food and calcium intake: can intervention work? A systematic review of the literature. Public health nutrition 16(2): 365-376	- Systematic review. Included studies checked for eligibility. *Individual studies included populations > 5 years or did not assess outcomes relevant to this review*
Hendrie, GA and Golley, RK (2011) Changing from regular-fat to low-fat dairy foods reduces saturated fat intake but not energy intake in 4-13-y-old children. American journal of clinical nutrition 93(5): 1117-1127	- Ineligible population *Study included children 4 to 13 (Mean 8.6±2.6) years and results were not stratified by age*
Hendrie, GA, Lease, HJ, Bowen, J et al. (2017) Strategies to increase children's vegetable intake in home and community settings: a systematic review of literature. Maternal & child nutrition 13(1)	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Individual studies relevant to the review have been included as individual studies or are included in Hodder 2020*
Hendy, H. M. (2002) Effectiveness of trained peer models to encourage food acceptance in preschool children. Appetite 39(3): 217-25	- Ineligible study design *Non-randomised controlled trial*
Hendy, H.M.; Williams, K.E.; Camise, T.S. (2011) Kid's Choice Program improves weight management behaviors and weight status in school children. Appetite 56(2): 484-494	- Ineligible population *Target population was children in 1st to 4th grades.*
Hendy, HM (1999) Comparison of five teacher actions to encourage children's new food acceptance. Annals of behavioral medicine 21(1): 20-26	- Falls within the same date range as Cochrane systematic review (Hodder 2020)

Study	Code [Reason]
Herman, Ariella, Nelson, Bergen B., Teutsch, Carol et al. (2012) "Eat Healthy, Stay Active!": a coordinated intervention to improve nutrition and physical activity among Head Start parents, staff, and children. American journal of health promotion : AJHP 27(1): e27-36	- Ineligible study design *Non-RCT*
Hesketh, K.D., Salmon, J., McNaughton, S.A. et al. (2020) Long-term outcomes (2 and 3.5 years post-intervention) of the INFANT early childhood intervention to improve health behaviors and reduce obesity: Cluster randomised controlled trial follow-up. International Journal of Behavioral Nutrition and Physical Activity 17(1): 95	- Domain not of interest *Study focused on obesity which is outside the remit of this guideline*
Hetherington MM, Schwartz C, Madrelle J et al. (2015) A step-by-step introduction to vegetables at the beginning of complementary feeding. The effects of early and repeated exposure. Appetite: 280-90	- No analysable data *Included in Hodder 2020 but outcome reported was in infants <12 months. Data in infants >12 months was not reported in analysable format. Data was reported as figures and unable to retrieve outcome values*
Hill, KE; Hart, LM; Paxton, SJ (2020) Confident Body, Confident Child: outcomes for Children of Parents Receiving a Universal Parenting Program to Promote Healthful Eating Patterns and Positive Body Image in Their Pre-Schoolers-An Exploratory RCT Extension. International journal of environmental research and public health 17(3)	- No outcomes of interest *Outcomes included child eating patterns (retrained, emotional etc), body image and weight bias*
Hingle, MD, O'Connor, TM, Dave, JM et al. (2010) Parental involvement in interventions to improve child dietary intake: a systematic review. Preventive medicine 51(2): 103-11	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Studies were excluded because they focused on obesity prevention which is not the remit of this guideline, or they included children >5 years*
Hoffman, J.A., Franko, D.L., Thompson, D.R. et al. (2010) Longitudinal behavioral effects of a school-based fruit and vegetable promotion program. Journal of pediatric psychology 35(1): 61-71	- Ineligible population *Included kindergarten and first grade children, mean age 6.2 years*
Hoffman, JA, Thompson, DR, Franko, DL et al. (2011) Decaying behavioral effects in a randomized, multi-year fruit and vegetable	- Ineligible population *Included kindergarten and first grade children, mean age 6.2 years*

Study	Code [Reason]
intake intervention. Preventive medicine 52(5): 370-375	
Holley, Clare E.; Haycraft, Emma; Farrow, Claire (2015) 'Why don't you try it again?' A comparison of parent led, home based interventions aimed at increasing children's consumption of a disliked vegetable. Appetite 87: 215-22	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Hong, Phan Y, Hanson, Matthew D, Lishner, David A et al. (2018) A field experiment examining mindfulness on eating enjoyment and behavior in children. Mindfulness 9: 1748-1756	- Included in Cochrane systematic review (Hodder 2020) *Not included in this review as intervention (mindfulness) does not match protocol criteria*
Hopper, Chris A, Munoz, Kathy D, Gruber, Mary B et al. (1996) A school-based cardiovascular exercise and nutrition program with parent participation: An evaluation study. Children's Health Care 25(3): 221-235	- Ineligible population *Children in 2nd and 4th grade*
Horne, Pauline J, Greenhalgh, Janette, Erjavec, Mihela et al. (2011) Increasing pre-school children's consumption of fruit and vegetables. A modelling and rewards intervention. Appetite 56(2): 375-85	- Ineligible study design *Before and after study*
Horne, PJ, Hardman, CA, Lowe, CF et al. (2009) Increasing parental provision and children's consumption of lunchbox fruit and vegetables in Ireland: the Food Dudes intervention. European journal of clinical nutrition 63(5): 613-618	- Ineligible population *Included children 4 to 11 years and results were not separated by age. Mean age of children not reported.*
Horodynski, MA and Stommel, M (2005) Nutrition education aimed at toddlers: an intervention study. Pediatric nursing 31(5): 364, 367-72	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Houston-Price C, Owen LH, Kennedy OB et al. (2019) Parents' experiences of introducing toddlers to fruits and vegetables through repeated exposure, with and without prior visual familiarization to foods: evidence from daily diaries. Food Quality and Preference: 291-300	- Included in Cochrane systematic review (Hodder 2020) *Same study as Owen 2018 reporting on same outcome*
Howerton, M.W., Bell, B.S., Dodd, K.W. et al. (2007) School-based Nutrition Programs Produced a Moderate Increase in Fruit and Vegetable Consumption: Meta and Pooling	- Systematic review. Included studies checked for eligibility.

Study	Code [Reason]
Analyses from 7 Studies. Journal of Nutrition Education and Behavior 39(4): 186-196	*Included studies had population of children in grades 2 to 9.*
Hughes, S.O., Power, T.G., Baker, S.S. et al. (2022) Short-Term Efficacy of a Childhood Obesity Prevention Program Designed to Pair Feeding Content with Nutrition Education. Childhood obesity (Print)	- Domain not of interest *Study focused on obesity preventions which falls outside the remit of this guideline*
Hughes, S.O., Power, T.G., Beck, A. et al. (2020) Short-Term Effects of an Obesity Prevention Program Among Low-Income Hispanic Families With Preschoolers. Journal of nutrition education and behavior 52(3): 224-239	- Domain not of interest *Study focused on obesity prevention which falls outside the remit of this guideline*
Hunsaker, SL and Jensen, CD (2017) Effectiveness of a Parent Health Report in Increasing Fruit and Vegetable Consumption Among Preschoolers and Kindergarteners. Journal of nutrition education and behavior 49(5): 380-386.e1	- No analysable data *Included in Hodder 2020 but data not reported in analysable format. Data reported as Bayesian estimates and in figures*
Iaia, M., Pasini, M., Burnazzi, A. et al. (2017) An educational intervention to promote healthy lifestyles in preschool children: A cluster-RCT. International Journal of Obesity 41(4): 582-590	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Ilić, A, Bituh, M, Karlović, T et al. (2022) P139 Three-year School-based Intervention May Change Primary School Children's Preferences for Fruit and Vegetable Dishes...Society for Nutrition Education and Behavior Annual Conference, 29-31 July, 2022, Atlanta, Georgia. Journal of nutrition education and behavior 54(7): 84	- Conference abstract
Ireton, Carol L. and Guthrie, Helen A. (1972) Modification of vegetable-eating behavior in preschool children. Journal of Nutrition Education 4(3): 100-103	- Ineligible study design *Non-randomised controlled trial*
Irwin, B.R., Speechley, M., Wilk, P. et al. (2020) Promoting healthy beverage consumption habits among elementary school children: results of the Healthy Kids Community Challenge 'Water Does Wonders' interventions in London, Ontario. Canadian journal of public health = Revue canadienne de sante publique 111(2): 257-268	- Ineligible population *Population included children of grade 4-8 (8 to 14 years)*

Study	Code [Reason]
Jaime, Patricia Constante and Lock, Karen (2009) Do school based food and nutrition policies improve diet and reduce obesity?. Preventive medicine 48(1): 45-53	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Individual studies relevant to the review have been included as individual studies or are included in Hodder 2020. Studies were excluded because they included populations >5 years*
Jamelske, Eric, Bica, Lori A, McCarty, Daniel J et al. (2008) Preliminary findings from an evaluation of the USDA Fresh Fruit and Vegetable Program in Wisconsin schools. WMJ : official publication of the State Medical Society of Wisconsin 107(5): 225-30	- Ineligible population *Included children in the 4th, 7th and 9th grades*
Jancey, J.M., Dos Remedios Monteiro, S.M., Dhaliwal, S.S. et al. (2014) Dietary outcomes of a community based intervention for mothers of young children: A randomised controlled trial. International Journal of Behavioral Nutrition and Physical Activity 11(1): 120	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Jansen, Esther; Mulkens, Sandra; Jansen, Anita (2007) Do not eat the red food!: prohibition of snacks leads to their relatively higher consumption in children. Appetite 49(3): 572-7	- No outcomes of interest *Outcomes included desire for sweets and crisps and the 'restriction scale' only on the Child Feeding Questionnaire*
Jansen, Esther; Mulkens, Sandra; Jansen, Anita (2010) How to promote fruit consumption in children. Visual appeal versus restriction. Appetite 54(3): 599-602	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Jensen, BW, von Kappelgaard, LM, Nielsen, BM et al. (2015) Intervention effects on dietary intake among children by maternal education level: results of the Copenhagen School Child Intervention Study (CoSCIS). British journal of nutrition 113(6): 963-974	- Ineligible population *Population included children entering preschool class and aged 6 years (mean age 6·8 and 9·5 years for intervention and comparison groups, respectively)*
Jepson, R.G., Harris, F.M., Platt, S. et al. (2010) The effectiveness of interventions to change six health behaviours: a review of reviews. BMC public health 10: 538	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Studies were excluded because they had an ineligible population or falls within the same date range as Hodder 2020*

Study	Code [Reason]
Johnson, B A, Kremer, P J, Swinburn, B A et al. (2012) Multilevel analysis of the Be Active Eat Well intervention: environmental and behavioural influences on reductions in child obesity risk. International journal of obesity (2005) 36(7): 901-7	- Ineligible population *Included children aged 4 to 12 years. (mean age 8.16 and 98.19 years for intervention and comparison groups, respectively)*
Johnson, Susan L., Bellows, Laura, Beckstrom, Leslie et al. (2007) Evaluation of a social marketing campaign targeting preschool children. American journal of health behavior 31(1): 44-55	- Ineligible study design *Quasi-experimental study design*
Jones, J, Wyse, R, Finch, M et al. (2015) Effectiveness of an intervention to facilitate the implementation of healthy eating and physical activity policies and practices in childcare services: a randomised controlled trial. Implementation science 10: 147	- Ineligible intervention *Main aim of study was to improve childcare services implementation of health eating and physical activity policies and practices, although intervention strategies included an educational element and secondary outcomes included children's intake of vegetables, fruit, grains, meat and meat alternatives, milk, yoghurt and cheese and discretionary foods*
Jones, L.J., VanWassenhove-Paetzold, J., Thomas, K. et al. (2020) Impact of a fruit and vegetable prescription program on health outcomes and behaviors in young navajo children. Current Developments in Nutrition 4(8): nzaa109	- Ineligible study design *Non randomised, unpaired study. An evaluation of a program implemented to increase healthy food access and promote early child health*
Jouret, B, Ahluwalia, N, Dupuy, M et al. (2009) Prevention of overweight in preschool children: results of kindergarten-based interventions. International journal of obesity (2005) 33(10): 1075-1083	- Ineligible intervention *Intervention included diet and physical activity components and outcomes (BMI) reported in children were not solely diet-related*
Kahn, R; Bonuck, K; Trombley, M (2007) Randomized controlled trial of bottle weaning intervention: a pilot study. Clinical pediatrics 46(2): 163-174	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Kamath, C.C., Vickers, K.S., Ehrlich, A. et al. (2008) Behavioral interventions to prevent childhood obesity: A systematic review and metaanalyses of randomized trials. Journal of Clinical Endocrinology and Metabolism 93(12): 4606-4615	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Studies were excluded because they had an ineligible population or were non-randomised studies*

Study	Code [Reason]
Karanja, N., Lutz, T., Ritenbaugh, C. et al. (2010) The TOTS community intervention to prevent overweight in American Indian toddlers beginning at birth: a feasibility and efficacy study. Journal of community health 35(6): 667-675	- Ineligible study design *Simulated before and after study design (control group is a different cohort that existed prior to the intervention). Intervention delivered in the antenatal period and extending into postnatal period. Also, interventions included community wide interventions such as media awareness along with family-based intervention. Participants recruited antenatally but outcomes measured from 6 months to 24 months.*
Karmali, S., Battram, D.S., Burke, S.M. et al. (2020) Perspectives and impact of a parent-child intervention on dietary intake and physical activity behaviours, parental motivation, and parental body composition: A randomized controlled trial. International Journal of Environmental Research and Public Health 17(18): 1-41	- Ineligible population *Study included parents of children aged 2.5 to 10 (Mean 6.8) years and results were not separated by age*
Katz, D.L., Katz, C.S., Treu, J.A. et al. (2011) Teaching healthful food choices to elementary school students and their parents: The nutrition detectivesTM program. Journal of School Health 81(1): 21-28	- Ineligible population *Target population was children in grades 2 to 4 (ages 7 to 9 approxinamtely)*
Kaufman-Shriqui, V., Fraser, D., Friger, M. et al. (2016) Effect of a school-based intervention on nutritional knowledge and habits of low-socioeconomic school children in Israel: A cluster-randomized controlled trial. Nutrients 8(4): 53	- Ineligible population *Included children aged 4 to 7 years. Mean 6.3 years and outcomes were not separated by age*
Keller K, Forman J, Lee NM et al. (2011) Use of license spokes-characters to increase intake of fruits and vegetables as part of a childhood obesity prevention program: pilot study results. Obesity : S109	- Conference abstract
Kemp, B.J., Thompson, D.R., Watson, C.J. et al. (2021) Effectiveness of family-based eHealth interventions in cardiovascular disease risk reduction: A systematic review. Preventive Medicine 149: 106608	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Studies were excluded because they included populations >5 years or had a mean population age >5 years*
Kenney, E.L., Gortmaker, S.L., Carter, J.E. et al. (2015) Grab a Cup, Fill It Up! An Intervention to	- Ineligible population

Study	Code [Reason]
Promote the Convenience of Drinking Water and Increase Student Water Consumption During School Lunch. American journal of public health 105(9): 1777-1783	*Included whole school population. No age reported*
Kerver, J, Contreras, D, Horodynski, M et al. (2019) NP7 Effectiveness of Supports for Family Mealtimes on Obesity Prevention Among Head Start Preschoolers: screening Phase Results From the Simply Dinner Study...Society for Nutrition Education and Behavior 52nd Annual Conference, Nutrition Education: rooted in Food, July 27-30, 2019, Orlando, Florida. Journal of nutrition education and behavior 51: 12	- Conference abstract
Kessler, Holly S. (2016) Simple interventions to improve healthy eating behaviors in the school cafeteria. Nutrition Reviews 74(3): 198-209	- Systematic review. Included studies checked for eligibility. *Population included children from kindergarten to high school and the results were not presented separately by age in the systematic review. Individual studies also did not report results separately for ages required in this review*
Kim, Jieun, Kim, Gilsook, Park, Jinah et al. (2019) Effectiveness of Teacher-Led Nutritional Lessons in Altering Dietary Habits and Nutritional Status in Preschool Children: Adoption of a NASA Mission X-Based Program. Nutrients 11(7)	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Kling, Samantha M. R., Roe, Liane S., Keller, Kathleen L. et al. (2016) Double trouble: Portion size and energy density combine to increase preschool children's lunch intake. Physiology & behavior 162: 18-26	- Ineligible intervention *Included in Hodder 2020 but intervention does not meet protocol criteria*
Knai, Cecile, Pomerleau, Joceline, Lock, Karen et al. (2006) Getting children to eat more fruit and vegetables: a systematic review. Preventive medicine 42(2): 85-95	- Systematic review. Included studies checked for eligibility. *Review had a mixed population of children 5 to 18 years old. No individual study was identified that met the inclusion criteria as study population were >5 years. One study (Lowe & Horne) included 5-7 year olds but results were not separated by age.*
Knowlden, A. and Sharma, M. (2016) One-Year Efficacy Testing of Enabling Mothers to Prevent Pediatric Obesity Through Web-Based	- Falls within the same date range as Cochrane systematic review (Hodder 2020)

Study	Code [Reason]
Education and Reciprocal Determinism (EMPOWER) Randomized Control Trial. Health education & behavior : the official publication of the Society for Public Health Education 43(1): 94-106	
Knowlden, A.P. and Conrad, E. (2018) Two-Year Outcomes of the Enabling Mothers to Prevent Pediatric Obesity Through Web-Based Education and Reciprocal Determinism (EMPOWER) Randomized Control Trial. Health education & behavior : the official publication of the Society for Public Health Education 45(2): 262-276	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Knowlden, A.P., Sharma, M., Cottrell, R.R. et al. (2015) Impact evaluation of Enabling Mothers to Prevent Pediatric Obesity through Web-Based Education and Reciprocal Determinism (EMPOWER) Randomized Control Trial. Health education & behavior : the official publication of the Society for Public Health Education 42(2): 171-184	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Koblinsky, Sally A.; Guthrie, Joanne F.; Lynch, Loretta (1992) Evaluation of a nutrition education program for head start parents. Journal of Nutrition Education 24(1): 4-13	- Ineligible study design *Non-randomised controlled trial*
Koch, P.A. (2000) A comparison of two nutrition education curricula: Cookshops and food and environment lessons.: 170	- Dissertation or thesis
Kocken, P.L., Eeuwijk, J., Van Kesteren, N.M. et al. (2012) Promoting the Purchase of Low-Calorie Foods From School Vending Machines: A Cluster-Randomized Controlled Study. Journal of School Health 82(3): 115-122	- Ineligible population *Target population was high school students*
Kong, A., Buscemi, J., Stolley, M.R. et al. (2016) Hip-Hop to Health Jr. Randomized Effectiveness Trial: 1-Year Follow-up Results. American Journal of Preventive Medicine 50(2): 136-144	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Kostecka, M. (2022) The Effect of the "Colorful Eating Is Healthy Eating" Long-Term Nutrition Education Program for 3-to 6-Year-Olds on Eating Habits in the Family and Parental Nutrition Knowledge. International Journal of	- Ineligible study design *Non-randomised study design (before and after study).*

Study	Code [Reason]
Environmental Research and Public Health 19(4): 1981	
Kral, Tanja V. E., Kabay, April C., Roe, Liane S. et al. (2010) Effects of doubling the portion size of fruit and vegetable side dishes on children's intake at a meal. Obesity (Silver Spring, Md.) 18(3): 521-7	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Kremers, Stef P. J., de Bruijn, Gert-Jan, Droomers, Mariel et al. (2007) Moderators of environmental intervention effects on diet and activity in youth. American journal of preventive medicine 32(2): 163-72	- Systematic review. Included studies checked for eligibility. *Studies had populations >5 years, wrong intervention for example pricing and point-of-purchase promotion or no outcome of interest. Individual studies relevant to the review have been included as individual studies or are included in Hodder 2020*
Krishnaswami, J., Martinson, M., Wakimoto, P. et al. (2012) Community-engaged interventions on diet, activity, and weight outcomes in U.S. schools: A systematic review. American Journal of Preventive Medicine 43(1): 81-91	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Included studies did not meet the criteria for this review due to populations being >5 years or the intervention focused on physical activity*
Kuhl, ES, Clifford, LM, Bandstra, NF et al. (2014) Examination of the association between lifestyle behavior changes and weight outcomes in preschoolers receiving treatment for obesity. Health psychology 33(1): 95-98	- Ineligible intervention *Main aim was to prevent obesity and intervention included information on diet and physical activity behavioural changes. Study was focused on examining the effect of the intervention components so different intervention delivery groups lumped together for analysis.*
Kumari, S, Mehra, R, Bhargava, U et al. (1985) Implications of nutrition education versus food supplementation in pre-school children. Indian pediatrics 22(3): 221-224	- Ineligible country *Not a high income country (defined by OECD) as specified in the protocol*
Lambrinou, CP, van Stralen, MM, Androutsos, O et al. (2019) Mediators of the effectiveness of a kindergarten-based, family-involved intervention on pre-schoolers' snacking behaviour: the ToyBox-study. Public health nutrition 22(1): 157-163	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Landry, M.J., van den Berg, A.E., Hoelscher, D.M. et al. (2021) Impact of a school-based	- Ineligible population

Study	Code [Reason]
gardening, cooking, nutrition intervention on diet intake and quality: The tx sprouts randomized controlled trial. Nutrients 13(9): 3081	*Study included 3rd to 5th grade students*
Lane, Hannah, Porter, Kathleen, Estabrooks, Paul et al. (2016) A Systematic Review to Assess Sugar-Sweetened Beverage Interventions for Children and Adolescents across the Socioecological Model. Journal of the Academy of Nutrition & Dietetics 116(8): 1295-1307e6	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Individual studies relevant to the review have been included as individual studies or are included in Hodder 2020. Studies were not eligible either because they were conducted in countries other than OECD High income countries or they had populations >5 year. One study (Van Grieken 2014) included children aged 5 years but outcomes were reported at age 7 and has been excluded as per protocol.*
Lanigan, Jane, Bailey, Rachel, Jackson, Alexandra Malia Timpson et al. (2019) Child-Centered Nutrition Phrases Plus Repeated Exposure Increase Preschoolers' Consumption of Healthful Foods, but Not Liking or Willingness to Try. Journal of nutrition education and behavior 51(5): 519-527	- No analysable data *Included in Hodder 2020 but data not presented in analysable format. Data presented as beta (SE)*
Lanigan, Jane, Bailey, Rachel, Ramsay, Samantha et al. (2017) Child centered nutrition phrases: messaging increases young children's consumption of healthful foods. Journal of Nutrition Education and Behavior 49(7): 49	- Conference abstract *Included in Hodder 2020 but is a conference abstract*
Larsen, A.L., Liao, Y., Alberts, J. et al. (2017) RE-AIM Analysis of a School-Based Nutrition Education Intervention in Kindergarteners. The Journal of school health 87(1): 36-46	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Laureati, M; Bergamaschi, V; Pagliarini, E (2014) School-based intervention with children. Peer-modeling, reward and repeated exposure reduce food neophobia and increase liking of fruits and vegetables. Appetite 83: 26-32	- Ineligible population *Population was children aged 6 to 9 years*
Laws, R, Campbell, KJ, van der Pligt, P et al. (2014) The impact of interventions to prevent obesity or improve obesity related behaviours in children (0-5 years) from socioeconomically disadvantaged and/or indigenous families: a systematic review. BMC public health 14(1): 779	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Individual studies relevant to the review have been included as individual studies or are included in Hodder 2020. Studies were excluded because they had populations <12 months,*

Study	Code [Reason]
	were conducted in LMIC, used an inappropriate study design
Ledoux, T., Robinson, J., Baranowski, T. et al. (2018) Teaching Parents About Responsive Feeding Through a Vicarious Learning Video: A Pilot Randomized Controlled Trial. Health education & behavior : the official publication of the Society for Public Health Education 45(2): 229-237	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Lee, Rebecca E., Parker, Nathan H., Soltero, Erica G. et al. (2017) Sustainability via Active Garden Education (SAGE): results from two feasibility pilot studies. BMC public health 17(1): 242	- Ineligible study design *Not a randomised trial*
Lee, RM, Giles, CM, Cradock, AL et al. (2018) Impact of the Out-of-School Nutrition and Physical Activity (OSNAP) Group Randomized Controlled Trial on Children's Food, Beverage, and Calorie Consumption among Snacks Served. Journal of the Academy of Nutrition and Dietetics 118(8): 1425-1437	- Ineligible population *Study included children aged >5years and the findings were not presented separately for 5 year olds. Mean age 7.8 and 7.6 for intervention and control groups respectively.*
Lioret, Sandrine, Cameron, Adrian J, McNaughton, Sarah A et al. (2015) Association between maternal education and diet of children at 9 months is partially explained by mothers' diet. Maternal & child nutrition 11(4): 936-47	- Ineligible study design *Not an intervention study. Secondary analysis of study which focused on obesity prevention*
Lissau, Inge (2007) Prevention of overweight in the school arena. Acta paediatrica (Oslo, Norway : 1992) 96(454): 12-8	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Studies either focused on obesity prevention or included population > 5 years*
Llargues, E., Franco, R., Recasens, A. et al. (2011) Assessment of a school-based intervention in eating habits and physical activity in school children: The AVall study. Journal of Epidemiology and Community Health 65(10): 896-901	- Ineligible population *Included children aged 5 to 6 years. Mean age 6.03±0.3*
Llargués, E, Recasens, A, Franco, R et al. (2012) Medium-term evaluation of an educational intervention on dietary and physical exercise habits in schoolchildren: the Avall 2 study. Endocrinologia y nutricion 59(5): 288-295	- Language not English

Study	Code [Reason]
Llargués, Esteve, Recasens, Ma Assumpta, Manresa, Josep-Maria et al. (2017) Four-year outcomes of an educational intervention in healthy habits in schoolchildren: the Avall 3 Trial. European Journal of Public Health 27(1): 42-47	- Ineligible population *Mean population age at recruitment was 6 (SD = 0.3) years and study was 6 years long. Therefore, outcomes were reported at a mean age of 12 years*
Lloyd, AB, Lubans, DR, Plotnikoff, RC et al. (2014) Impact of the 'Healthy Dads, Healthy Kids' lifestyle programme on the activity- and diet-related parenting practices of fathers and mothers. Pediatric obesity 9(6): e149-55	- Ineligible population *Included fathers with their children attending primary school at any level. Mean age 8.9 and findings were not reported by age*
Locard, E; Boyer, M; Beroujon, M (1987) Evaluation of a nutritional education program in nursery schools. Archives francaises de pediatrie 44: 205-209	- Language not English
Lycett, K., Miller, A., Knox, A. et al. (2017) 'Nudge' interventions for improving children's dietary behaviors in the home: A systematic review. Obesity Medicine 7: 21-33	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Individual studies relevant to the review have been included as individual studies or are included in Hodder 2020*
Lyons, E.R., Nekkanti, A.K., Funderburk, B.W. et al. (2022) Parent-Child Interaction Therapy Supports Healthy Eating Behavior in Child Welfare-Involved Children. International Journal of Environmental Research and Public Health 19(17): 10535	- No outcomes of interest *Outcome was Child eating behaviour questionnaire and the domains represented do not align with the outcomes in the protocol*
López-Contreras, IN, Vilchis-Gil, J, Klünder-Klünder, M et al. (2020) Dietary habits and metabolic response improve in obese children whose mothers received an intervention to promote healthy eating: randomized clinical trial. BMC public health 20(1): 1240	- Ineligible population *Study included children aged 5 -11 years and results were not presented separately by age. Mean age 8.6 and 8.7 for intervention and control group respextively*
Machado, Stephanie S, Burton, Michael, Loy, Wes et al. (2020) Promoting school lunch fruit and vegetable intake through role modeling: a pilot study. AIMS public health 7(1): 10-19	- Ineligible study design *Non-randomised study, survey design without a control group*
Mallan KM; Daniels LA; Nicholson JM. (2017) Obesogenic eating behaviors mediate the relationships between psychological problems and BMI in children. Obesity 5(25): 928-34.	- Ineligible study design *Cross-sectional study*

Study	Code [Reason]
Mangunkusumo, R.T., Brug, J., De Koning, H.J. et al. (2007) School-based internet-tailored fruit and vegetable education combined with brief counselling increases children's awareness of intake levels. Public Health Nutrition 10(3): 273-279	- Ineligible population *Children aged 9-12 years*
Manios, Y., Moschandreas, J., Hatzis, C. et al. (2002) Health and nutrition education in primary schools of Crete: Changes in chronic disease risk factors following a 6-year intervention programme. British Journal of Nutrition 88(3): 315-324	- Ineligible population *Included children in grade 1 (5.5 to 6.5 years) but outcomes were measured when children were in sixth grade (10.5 to 11.5 years)*
Manios, Y, Moschandreas, J, Hatzis, C et al. (1999) Evaluation of a health and nutrition education program in primary school children of Crete over a three-year period. Preventive medicine 28(2): 149-159	- Ineligible population *Study included grades 1 to 6 pupils and the results were not separated by age or grade.*
Mannino, M; Rollins, B; Francis, L (2019) NP4 Improving Preschool Children's Food Knowledge and Food Choice Intentions: results From a Childhood Obesity Preventive Intervention...Society for Nutrition Education and Behavior 52nd Annual Conference, Nutrition Education: rooted in Food, July 27-30, 2019, Orlando, Florida. Journal of nutrition education and behavior 51: 11	- Conference abstract
Marcano-Olivier, M, Pearson, R, Ruparell, A et al. (2019) A low-cost Behavioural Nudge and choice architecture intervention targeting school lunches increases children's consumption of fruit: a cluster randomised trial. International journal of behavioral nutrition and physical activity 16(1): 20	- Ineligible population *Study included children from year 1 to year 6 and results were not separated by age or school year to meet the inclusion criteria for this review*
Marcano-Olivier, Mariel I., Horne, Pauline J., Viktor, Simon et al. (2020) Using Nudges to Promote Healthy Food Choices in the School Dining Room: A Systematic Review of Previous Investigations. Journal of School Health 90(2): 143-157	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Individual studies included a mixed population from kindergarten to grade 5 and results were not separated by age*
Marconi, S., Vezzoli, M., Locatelli, M. et al. (2022) The role of primary school teachers' nutrition training in healthy eating promotion. Health Education Journal 81(5): 554-572	- Ineligible population *Students from 3rd, 4th and 5th year*

Study	Code [Reason]
Margolies, A., Kemp, C.G., Choo, E.M. et al. (2022) Nutrition-sensitive agriculture programs increase dietary diversity in children under 5 years: A review and meta-analysis. Journal of global health 12: 08001	- Systematic review. Included studies checked for eligibility. *Review focused on LMICs*
Markert, J, Herget, S, Petroff, D et al. (2014) Telephone-based adiposity prevention for families with overweight children (T.A.F.F.-Study): one year outcome of a randomized, controlled trial. International journal of environmental research and public health 11(10): 10327-10344	- Ineligible population *Participants included children aged 4 to 18 years were not presented separately for ages 4-5. Mean age 9.7 and 9.8 for intervention and control arms respectively*
Marshall, A.N., Markham, C., Ranjit, N. et al. (2020) Long-term impact of a school-based nutrition intervention on home nutrition environment and family fruit and vegetable intake: A two-year follow-up study. Preventive Medicine Reports 20: 101247	- Ineligible population *Mixed population with children ranging from ages 5-7 years (Mean 6.12)*
Masset, Edoardo, Haddad, Lawrence, Cornelius, Alexander et al. (2012) Effectiveness of agricultural interventions that aim to improve nutritional status of children: systematic review. BMJ (Clinical research ed.) 344: d8222	- Systematic review. Included studies checked for eligibility. *Included only studies conducted in LMICs*
Mathias, Kevin C., Rolls, Barbara J., Birch, Leann L. et al. (2012) Serving larger portions of fruits and vegetables together at dinner promotes intake of both foods among young children. Journal of the Academy of Nutrition and Dietetics 112(2): 266-70	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Matvienko-Sikar, K, Toomey, E, Delaney, L et al. (2018) Effects of healthcare professional delivered early feeding interventions on feeding practices and dietary intake: A systematic review. Appetite 123: 56-71	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Matwiejczyk, L., Mehta, K., Scott, J. et al. (2018) Characteristics of effective interventions promoting healthy eating for pre-schoolers in childcare settings: An umbrella review. Nutrients 10(3): 293	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Included systematic reviews were already identified in this review and individual studies assessed or focused on obesity which is outside the remit of this guideline.*

Study	Code [Reason]
Matwiejczyk, Louisa; McWhinnie, Julie-Anne; Colmer, Kaye (2007) An evaluation of a nutrition intervention at childcare centres in South Australia. Health promotion journal of Australia : official journal of Australian Association of Health Promotion Professionals 18(2): 159-62	- Unable to find full text *Library unable to supply full text*
McGowan, L, Cooke, LJ, Gardner, B et al. (2013) Healthy feeding habits: efficacy results from a cluster-randomized, controlled exploratory trial of a novel, habit-based intervention with parents. American journal of clinical nutrition 98(3): 769-777	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
McNally, SL, Anzman-Frasca, S, Bowman, K et al. (2020) Using fundraising incentives and point-of-purchase nutrition promotion to improve food choices among school families in restaurants: a pilot and feasibility study. Public health nutrition 23(11): 2006-2015	- No outcomes of interest *Outcome relates to health foods ordered and was not measured in children only. Outcome was measured in families*
Me, P, Mj, E, Ad, O et al. (2022) A blended professional learning intervention for early childhood educators to target the promotion of physical activity and healthy eating: the HOPPEL cluster randomized stepped-wedge trial. BMC public health 22(1): 1353	- No outcomes of interest *Study is focused on improving physical activity level and outcomes measured in children was physical activity*
Meinen, A., Friese, B., Wright, W. et al. (2012) Youth Gardens Increase Healthy Behaviors in Young Children. Journal of Hunger and Environmental Nutrition 7(23): 192-204	- Ineligible study design *Quasi-experimental design*
Melnick, E.M., Thomas, K., Farewell, C. et al. (2020) Impact of a nutrition education programme on preschool children's willingness to consume fruits and vegetables. Public health nutrition 23(10): 1846-1853	- Ineligible study design *Quasi-experimental pre-post design*
Mennella, Julie A.; Kennedy, Janice M.; Beauchamp, Gary K. (2006) Vegetable acceptance by infants: effects of formula flavors. Early human development 82(7): 463-8	- Included in Cochrane systematic review (Hodder 2020) *Intervention was formula milk fed to infant based on taste. Participants were grouped based on formula milk currently consumed.*
Metcalfe, Jessica Jarick, Ellison, Brenna, Hamdi, Nader et al. (2020) A systematic review of school meal nudge interventions to improve youth food behaviors. International Journal of	- Systematic review. Included studies checked for eligibility.

Study	Code [Reason]
Behavioral Nutrition & Physical Activity 17(1): 1-19	*No additional studies identified for inclusion. Studies were excluded either because population was >5 years or were non-RCTs*
Micha, R., Karageorgou, D., Bakogianni, I. et al. (2018) Effectiveness of school food environment policies on children's dietary behaviors: A systematic review and meta-analysis. PLoS ONE 13(3): e0194555	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Studies were excluded because they included population >5 years*
Mier, Nelda; Piziak, Veronica; Valdez, Lupita (2005) Ultimate nutrition game for mexican american preschoolers. Journal of nutrition education and behavior 37(6): 325-6	- Ineligible study design *Non-randomised controlled trial. Evaluation of a pilot program to educate pre-schoolers about healthy eating*
Mikkelsen, MV, Husby, S, Skov, LR et al. (2014) A systematic review of types of healthy eating interventions in preschools. Nutrition journal 13(1): 56	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Studies were excluded because they were non-RCTs or had an ineligible population*
Mirotta, JA, Darlington, GA, Buchholz, AC et al. (2018) Guelph Family Health Study's Home-Based Obesity Prevention Intervention Increases Fibre and Fruit Intake in Preschool-Aged Children. Revue canadienne de la pratique et de la recherche en dietetique [Canadian journal of dietetic practice and research] 79(2): 86-90	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Moore, A.P., Nanthagopan, K., Hammond, G. et al. (2014) Influence of weaning timing advice and associated weaning behaviours in a survey of black and minority ethnic groups in the UK. Public health nutrition 17(9): 2094-2103	- Ineligible study design *Not an intervention study. Cross sectional survey*
Moran, A, Thorndike, A, Franckle, R et al. (2019) NP19 A Supermarket Intervention to Promote Fruit and Vegetable Consumption Among Low-Income Families...Society for Nutrition Education and Behavior, 52nd Annual Conference, Nutrition Education: rooted in Food, July 27-30, 2019, Orlando, Florida. Journal of nutrition education and behavior 51: 18	- Conference abstract
Morandi, A., Tommasi, M., Soffiati, F. et al. (2019) Prevention of obesity in toddlers	- Domain not of interest

Study	Code [Reason]
(PROBIT): a randomised clinical trial of responsive feeding promotion from birth to 24 months. International Journal of Obesity 43(10): 1961-1966	*Study focuses on obesity prevention which is outside the remit of this guideline*
Morgan, PJ, Collins, CE, Plotnikoff, RC et al. (2014) The 'Healthy Dads, Healthy Kids' community randomized controlled trial: a community-based healthy lifestyle program for fathers and their children. Preventive medicine 61: 90-99	- Ineligible intervention *Population included children aged 5 and 12 years and results were not stratified by age. Mean age 8.4 and 7.9 for control and intervention arms respectively*
Morrill, B.A., Madden, G.J., Wengreen, H.J. et al. (2016) A Randomized Controlled Trial of the Food Dudes Program: Tangible Rewards are More Effective Than Social Rewards for Increasing Short- and Long-Term Fruit and Vegetable Consumption. Journal of the Academy of Nutrition and Dietetics 116(4): 618-629	- Ineligible population *Population included children from grade 1 - 5*
Morshed, A.B., Tabak, R.G., Schwarz, C.D. et al. (2019) The Impact of a Healthy Weight Intervention Embedded in a Home-Visiting Program on Children's Weight and Mothers' Feeding Practices. Journal of nutrition education and behavior 51(2): 237-244	- Ineligible intervention *Intervention included diet and physical activity components and outcomes (BMI) reported in children were not solely diet-related*
Mustila, T., Raitanen, J., Keskinen, P. et al. (2012) Lifestyle counselling targeting infant's mother during the child's first year and offspring weight development until 4 years of age: A follow-up study of a cluster RCT. BMJ Open 2(1): 000624	- Ineligible intervention *Intervention included diet and physical activity components and outcomes (BMI) reported in children were not solely diet-related*
Nanney, M.S., Johnson, S., Elliott, M. et al. (2007) Frequency of Eating Homegrown Produce Is Associated with Higher Intake among Parents and Their Preschool-Aged Children in Rural Missouri. Journal of the American Dietetic Association 107(4): 577-584	- Ineligible study design *Cross-sectional survey*
Natale, R.A., Messiah, S.E., Asfour, L. et al. (2014) Role modeling as an early childhood obesity prevention strategy: effect of parents and teachers on preschool children's healthy lifestyle habits. Journal of developmental and behavioral pediatrics : JDBP 35(6): 378-387	- Falls within the same date range as Cochrane systematic review (Hodder 2020)

Study	Code [Reason]
Natale, RA, Lopez-Mitnik, G, Uhlhorn, SB et al. (2014) Effect of a child care center-based obesity prevention program on body mass index and nutrition practices among preschool-aged children. Health promotion practice 15(5): 695-705	- Domain not of interest *Included in Hodder 2020 but study focused on obesity prevention which falls outside the remit of this guideline*
Nathan, Nicole, Janssen, Lisa, Sutherland, Rachel et al. (2019) The effectiveness of lunchbox interventions on improving the foods and beverages packed and consumed by children at centre-based care or school: a systematic review and meta-analysis. International Journal of Behavioral Nutrition & Physical Activity 16(1): npag-npag	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Studies included population >5 years*
National Institute for Health and Clinical, Excellence (2006) A review of the Effectiveness of Interventions, Approaches and Models at Individual, Community and Population Level that are Aimed at Changing Health Outcomes Through Changing Knowledge Attitudes and Behaviour.: 1-218	- Systematic review. Included studies checked for eligibility. *No additional study identified for inclusion. Relevant studies are already identified in the search*
Nekitsing C, Blundell-Birtill P, CockroM J et al. (2018) Effects of congruent and incongruent experiential learning on intake of a novel vegetable in preschool children: a cluster randomized trial. Appetite : 311	- Conference abstract
Nekitsing, C, Blundell-Birtill, P, Cockroft, JE et al. (2019) Increasing Intake of an Unfamiliar Vegetable in Preschool Children Through Learning Using Storybooks and Sensory Play: a Cluster Randomized Trial. Journal of the Academy of Nutrition and Dietetics 119(12): 2014-2027	- No analysable data *Included in Hodder 2020 but not meta-analysed. Data presented in tables and unable to extract data*
Nekitsing, C, Blundell-Birtill, P, Cockroft, JE et al. (2018) Systematic review and meta-analysis of strategies to increase vegetable consumption in preschool children aged 2-5 years. Appetite 127: 138-154	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Nemet, D., Barkan, S., Epstein, Y. et al. (2005) Short- and long-term beneficial effects of a combined dietary-behavioral- physical activity intervention for the treatment of childhood obesity. Pediatrics 115(4): e443-e449	- Conference abstract

Study	Code [Reason]
Nemet, D.; Geva, D.; Eliakim, A. (2011) Health promotion intervention in low socioeconomic kindergarten children. Journal of Pediatrics 158(5): 796-801e1	- No outcomes of interest *No available data on outcomes on interest. Outcomes not reported in an analysable format*
Nemet, D., Geva, D., Pantanowitz, M. et al. (2011) Health promotion intervention in Arab-Israeli kindergarten children. Journal of Pediatric Endocrinology and Metabolism 24(1112): 1001-1007	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Nemet, D; Barzilay-Teeni, N; Eliakim, A (2008) Treatment of childhood obesity in obese families. Journal of pediatric endocrinology & metabolism 21(5): 461-467	- Ineligible population *Population included children 8 to 11 years*
Nezami, B.T., Ward, D.S., Lytle, L.A. et al. (2018) A mHealth randomized controlled trial to reduce sugar-sweetened beverage intake in preschool-aged children. Pediatric Obesity 13(11): 668-676	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Nezami, B.T.; Wasser, H.M.; Tate, D.F. (2022) Parent and child dietary changes in a 6-month mobile-delivered weight loss intervention with tailored messaging for parents. Frontiers in public health 10: 972109	- Ineligible population *Study lumped together children of ages 2 to 12 (Mean 6.4) years and results were not presented separately by age*
Nezami, BT, Lytle, LA, Ward, DS et al. (2020) Effect of the Smart Moms intervention on targeted mediators of change in child sugar-sweetened beverage intake. Public health 182: 193-198	- Ineligible study design *Prognostic study assessing mother's behavioural factors that impact on a change in SSB intake of children*
Nichols, SDS; Francis, MP; Dalrymple, N (2014) Sustainability of a curriculum-based intervention on dietary behaviours and physical activity among primary school children in Trinidad and Tobago. West Indian medical journal 63(1): 68-77	- Ineligible population *Population included children in the sixth year*
Nicklas T, Lopez S, Liu Y et al. (2016) Using motivational theatre to increase vegetable consumption by preschool children. Journal of the Academy of Nutrition and Dietetics 9(116): A35	- Conference abstract
Norman, A., Zeebari, Z., Nyberg, G. et al. (2019) Parental support in promoting children's health	- Ineligible population

Study	Code [Reason]
behaviours and preventing overweight and obesity - A long-term follow-up of the cluster-randomised healthy school start study II trial. BMC Pediatrics 19(1): 104	*Target population was 6 year old children*
Norman, G.J., Zabinski, M.F., Adams, M.A. et al. (2007) A Review of eHealth Interventions for Physical Activity and Dietary Behavior Change. American Journal of Preventive Medicine 33(4): 336-345e16	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Studies were either conducted in an adult population on in children aged >5 years.*
Nunes, LM, Vigo, Á, Oliveira, LD et al. (2017) Effect of a healthy eating intervention on compliance with dietary recommendations in the first year of life: a randomized clinical trial with adolescent mothers and maternal grandmothers. Cadernos de saude publica 33(6): e00205615	- Language not English
Nystrom, C.D., Sandin, S., Henriksson, P. et al. (2017) Mobile-based intervention intended to stop obesity in preschool-aged children: The MINISTOP randomized controlled trial. American Journal of Clinical Nutrition 105(6): 1327-1335	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
O'Sullivan, A.; Fitzpatrick, N.; Doyle, O. (2017) Effects of early intervention on dietary intake and its mediating role on cognitive functioning: a randomised controlled trial. Public health nutrition 20(1): 154-164	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Oh, C., Carducci, B., Vaivada, T. et al. (2022) Digital Interventions for Universal Health Promotion in Children and Adolescents: A Systematic Review. Pediatrics 149(supplement5)	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Review included studies with population of children between 5 and 19.9 years*
Ojha, S, Elfzzani, Z, Kwok, TC et al. (2020) Education of family members to support weaning to solids and nutrition in later infancy in term-born infants. The Cochrane database of systematic reviews 7(7): cd012241	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Individual studies relevant to the review have been included as individual studies or are included in Hodder 2020. Studies were excluded either because they were conducted in a LMIC, measured outcomes only up to 12 months in infants or fall within the same date range as Hodder 2020.*

Study	Code [Reason]
Olvera, N, Bush, JA, Sharma, SV et al. (2010) BOUNCE: a community-based mother-daughter healthy lifestyle intervention for low-income Latino families. Obesity (Silver Spring, Md.) 18suppl1: S102-4	- Ineligible population *Included mothers and their daughters (ages 7 to 13)*
Olvera, Norma N., Knox, Brook, Scherer, Rhonda et al. (2008) A Healthy Lifestyle Program for Latino Daughters and Mothers. American Journal of Health Education 39(5): 283-295	- Ineligible population *Children in 3rd to 6th grade*
Onnerfalt, J., Erlandsson, L.K., Orban, K. et al. (2012) A family-based intervention targeting parents of preschool children with overweight and obesity: conceptual framework and study design of LOOPS- Lund overweight and obesity preschool study. BMC public health 12: 879	- Ineligible study design *Describes the design of the trial*
Osganian, S.K., Hoelscher, D.M., Zive, M. et al. (2003) Maintenance of effects of the Eat Smart school food service program: Results from the CATCH-ON study. Health Education and Behavior 30(4): 418-433	- Ineligible study design *Non-RCT study*
Ostbye, Truls, Krause, Katrina M., Stroo, Marissa et al. (2012) Parent-focused change to prevent obesity in preschoolers: results from the KAN-DO study. Preventive medicine 55(3): 188-95	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Ovrum, A. and Bere, E. (2014) Evaluating free school fruit: results from a natural experiment in Norway with representative data. Public health nutrition 17(6): 1224-1231	- Ineligible population *Target population include all children attending primary school and results were not separated by age/grade. Mean age not reported but mean Grade was 4.10*
Paek, Hye-Jin, Jung, Yumi, Oh, Hyun Jung et al. (2015) A social marketing approach to promoting healthful eating and physical activity in low-income and ethnically diverse schools. Health Education Journal 74(3): 351-363	- Ineligible population *Mixed population including children from pre-kindergarten to 5th grade and results were not separated by age. Analysis focused on 3rd to 5th grade*
Paineau, DL, Beaufils, F, Boulier, A et al. (2008) Family dietary coaching to improve nutritional intakes and body weight control: a randomized controlled trial. Archives of pediatrics & adolescent medicine 162(1): 34-43	- Ineligible population *Study population was children aged 7-9 years*

Study	Code [Reason]
Parcel, Guy S.; Bruhn, John G.; Murray, James Lester (1983) Preschool Health Education Program (PHEP): Analysis of Educational and Behavioral Outcome. Health Education Quarterly 10(34): 149-172	- No outcomes of interest
Parmer, S.M., Salisbury-Glennon, J., Shannon, D. et al. (2009) School Gardens: An Experiential Learning Approach for a Nutrition Education Program to Increase Fruit and Vegetable Knowledge, Preference, and Consumption among Second-grade Students. Journal of Nutrition Education and Behavior 41(3): 212-217	- Ineligible population *Target population was 2nd grade students*
Pastor, R. and Tur, J.A. (2020) Effectiveness of interventions to promote healthy eating habits in children and adolescents at risk of poverty: Systematic review and meta-analysis. Nutrients 12(6): 1-24	- Systematic review. Included studies checked for eligibility. *Individual studies had population >5 years*
Pears, SL, Jackson, MC, Bertenshaw, EJ et al. (2012) Validation of food diaries as measures of dietary behaviour change. Appetite 58(3): 1164-1168	- Ineligible intervention *Study aimed to validate a tool for measuring change in fruits and vegetables intake*
Penalvo, J.L., Santos-Beneit, G., Sotos-Prieto, M. et al. (2015) The SI! Program for Cardiovascular Health Promotion in Early Childhood A Cluster-Randomized Trial. Journal of the American College of Cardiology 66(14): 1525-1534	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Penalvo, J.L., Santos-Beneit, G., Sotos-Prieto, M. et al. (2013) A cluster randomized trial to evaluate the efficacy of a school-based behavioral intervention for health promotion among children aged 3 to 5. BMC public health 13: 656	- No outcomes of interest *Describes study methodology*
Penalvo, J.L., Sotos-Prieto, M., Santos-Beneit, G. et al. (2013) The Program SI! intervention for enhancing a healthy lifestyle in preschoolers: First results from a cluster randomized trial. BMC Public Health 13(1): 1208	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Perez-Escamilla, Rafael, Hromi-Fiedler, Amber, Vega-Lopez, Sonia et al. (2008) Impact of peer nutrition education on dietary behaviors and health outcomes among Latinos: a systematic	- Ineligible population *Focused on adult population*

Study	Code [Reason]
literature review. Journal of nutrition education and behavior 40(4): 208-25	
Perry, C.L., Bishop, D.B., Taylor, G.L. et al. (2004) A randomized school trial of environmental strategies to encourage fruit and vegetable consumption among children. Health education & behavior : the official publication of the Society for Public Health Education 31(1): 65-76	- Ineligible population *Target population was 1st and 3rd grade students and the results were lumped together. There was no report of the ages of the children*
Perry, CL; Mullis, R; Maile, M (1985) Modifying eating behaviour of children: a pilot intervention study. Journal of school health 55: 399-402	- Ineligible population *Participants included children in 3rd and 4th grades*
Perry, RA, Daniels, L, Baur, LA et al. (2018) Impact of a 6-month family-based weight management programme on child food and activity behaviours: short-term and long-term outcomes of the PEACH™ intervention. Pediatric obesity 13(11): 744-751	- Ineligible population *Study included children aged 5 to 9.9 (mean 8.1) years and findings were not separated by age.*
Pinket, AS, Van Lippevelde, W, De Bourdeaudhuij, I et al. (2016) Effect and Process Evaluation of a Cluster Randomized Control Trial on Water Intake and Beverage Consumption in Preschoolers from Six European Countries: the ToyBox-Study. PloS one 11(4): e0152928	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Poelman, A.A.M., Cochet-Broch, M., Wiggins, B. et al. (2020) Effect of experiential vegetable education program on mediating factors of vegetable consumption in australian primary school students: A cluster-randomized controlled trial. Nutrients 12(8): 1-19	- Ineligible population *Study included children in year 2 to 8 (7 to 12 years).*
Poelman, A.A.M., Djakovic, S., Heffernan, J.E. et al. (2022) Effectiveness of a Multi-Strategy Behavioral Intervention to Increase Vegetable Sales in Primary School Canteens: A Randomized Controlled Trial. Nutrients 14(19): 4218	- Ineligible population *Study included primary school children in kindergarten to year 6. Mean ages were 8.99, 9.18, 9.23 for the 3 intervention groups.*
Pollard, C.; Lewis, J.; Miller, M. (2001) Start right-eat right award scheme: implementing food and nutrition policy in child care centers. Health education & behavior : the official publication of	- No outcomes of interest *Outcomes included children's ability to take charge of their health*

Study	Code [Reason]
the Society for Public Health Education 28(3): 320-30	
Pomerleau, Joceline, World Health, Organization, Joint, F. A. O. W. H. O. Workshop on Fruit et al. (2005) Effectiveness of interventions and programmes promoting fruit and vegetable intake [electronic resource] / Joceline Pomerleau ... [et al.].	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Prelip, M., Slusser, W., Thai, C.L. et al. (2011) Effects of a school-based nutrition program diffused throughout a large urban community on attitudes, beliefs, and behaviors related to fruit and vegetable consumption. Journal of School Health 81(9): 520-529	- Ineligible population *Target population was 3rd to 5th grade children*
Prelip, M, Kinsler, J, Chan Le, Thai et al. (2012) Evaluation of a School-based Multicomponent Nutrition Education Program to Improve Young Children's Fruit and Vegetable Consumption. Journal of nutrition education and behavior 44(4): 310-318	- Ineligible population *Study population was grades 3-5, aged 8-11 years*
Presti, Giovambattista, Cau, Silvia, Oppo, Annalisa et al. (2015) Increased Classroom Consumption of Home-Provided Fruits and Vegetables for Normal and Overweight Children: Results of the Food Dudes Program in Italy. Journal of nutrition education and behavior 47(4): 338-44	- Ineligible population *Included children 5 to 11 years. Mean age not reported*
Prowse, RJL, Lee, KM, Chen, E et al. (2020) Testing the efficacy of and parents' preferences for nutrition labels on children's menus from a full-service chain restaurant: results of an online experiment. Public health nutrition 23(10): 1820-1831	- Ineligible intervention *Intervention involved labelling menu with nutritional and calorie information and study was conducted in children aged 3-12 years without results stratified by age. Percentage of children aged 3-4 years is 24.9% and 5-6 years 25.1%. Mean age not reported*
Puga, Ana M, Carretero-Krug, Alejandra, Montero-Bravo, Ana M et al. (2020) Effectiveness of Community-Based Interventions Programs in Childhood Obesity Prevention in a Spanish Population According to Different Socioeconomic School Settings. Nutrients 12(9)	- Ineligible study design *Cross-sectional study*

Study	Code [Reason]
Pérez Rodrigo, C, Aranceta, J, Brug, H et al. (2004) School-based education strategies to promote fruit and vegetable consumption: the Pro Children Project. Archivos latinoamericanos de nutricion 54(2suppl1): 14-19	- Language not English *Spanish*
Quandt, S.A., Dupuis, J., Fish, C. et al. (2013) Feasibility of using a community-supported agriculture program to improve fruit and vegetable inventories and consumption in an underresourced urban community. Preventing chronic disease 10: e136	- Ineligible population *Study targeted adult population >18 years*
Queral, Carmen B (2007) The impact of a Nutrition Education Program on Nutrition Knowledge and Attitudes, as well as Food Selection, in a Cohort of Migrant and Seasonal Farm Worker Children.: 285	- Unable to find full text
Rahman, A.A., Jomaa, L., Kahale, L.A. et al. (2018) Effectiveness of behavioral interventions to reduce the intake of sugar-sweetened beverages in children and adolescents: A systematic review and meta-analysis. Nutrition Reviews 76(2): 88-107	- Systematic review. Included studies checked for eligibility. *Studies not eligible due to either including population > 5 years, mean age of children > 5 years or conducted in LMIC. 2 relevant studies identified and included as individual studies (Bayer 2009 and Van Grieken 2014)*
Raju, Sekar; Rajagopal, Priyali; Gilbride, Timothy J. (2010) Marketing Healthful Eating to Children: The Effectiveness of Incentives, Pledges, and Competitions. Journal of Marketing 74(3): 93-106	- Ineligible population *Whole school population including ages 4 to 14 years. Results were not stratified by age and no mean age reported*
Ramsay, Samantha, Safaii, Seanne, Croschere, Tom et al. (2013) Kindergarteners' entree intake increases when served a larger entree portion in school lunch: a quasi-experiment. The Journal of school health 83(4): 239-42	- Ineligible study design *Quasi-experimental study*
Rangelov, N., Della Bella, S., Marques-Vidal, P. et al. (2018) Does additional support provided through e-mail or SMS in a Web-based Social Marketing program improve children's food consumption? A Randomized Controlled Trial. Nutrition Journal 17(1): 24	- Ineligible population *Study included all primary school aged children and first 2 grades of secondary school. Mean age was 8.5 years*
Ransley, J. K., Greenwood, D. C., Cade, J. E. et al. (2007) Does the school fruit and vegetable scheme improve children's diet? A non-	- Ineligible population

Study	Code [Reason]
randomised controlled trial. Journal of epidemiology and community health 61(8): 699-703	*Included children aged 4 to 6 years. Mean (SD) age is 72.1 (10.5) months*
Rappaport, EB; Daskalakis, C; Sendecki, JA (2013) Using routinely collected growth data to assess a school-based obesity prevention strategy. International journal of obesity (2005) 37(1): 79-85	- Ineligible population *Included whole school population, ages 4-18 years. No mean age reported*
Rausch, John C., Berger-Jenkins, Evelyn, Nieto, Andres R. et al. (2015) Effect of a School-Based Intervention on Parents' Nutrition and Exercise Knowledge, Attitudes, and Behaviors. American Journal of Health Education 46(1): 33-39	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Recasens, MA, Xicola-Coromina, E, Manresa, JM et al. (2019) Impact of school-based nutrition and physical activity intervention on body mass index eight years after cessation of randomized controlled trial (AVall study). Clinical nutrition (Edinburgh, Scotland) 38(6): 2592-2598	- Ineligible intervention *Intervention combined diet and physical activity, aimed at promoting health eating and physical activity. Outcome was BMI, which cannot be attributed to healthy eating alone. Children were in their first year of school but age was not specified*
Reinaerts, E, Crutzen, R, Candel, M et al. (2008) Increasing fruit and vegetable intake among children: comparing long-term effects of a free distribution and a multicomponent program. Health education research 23(6): 987-996	- Ineligible population *The mean age (8 years, SD =2.2) of child participants fell outside of the age range required for this review*
Reinaerts, E, de Nooijer, J, Candel, M et al. (2007) Increasing children's fruit and vegetable consumption: distribution or a multicomponent programme?. Public health nutrition 10(9): 939-947	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Remington AM, Anez EV, Cooke LJ et al. (2011) Tiny tastes. A home based intervention promoting acceptance of disliked vegetables. Appetite: S35-36	- Conference abstract
Resnick, E.A., Bishop, M., O'Connell, A. et al. (2009) The CHEER study to reduce BMI in Elementary School students: a school-based, parent-directed study in Framingham, Massachusetts. The Journal of school nursing : the official publication of the National Association of School Nurses 25(5): 361-372	- Ineligible population *Included children in kindergarten to grade 5 and results were not separated by age/grade*

Study	Code [Reason]
Ribeiro, R.Q. and Alves, L. (2014) Comparison of two school-based programmes for health behaviour change: the Belo Horizonte Heart Study randomized trial. Public health nutrition 17(6): 1195-1204	- Ineligible population *Target population was 1st to 5th graders (6 to 11 years). Mean age 8.5 years*
Roberts, KE, Ells, LJ, McGowan, VJ et al. (2017) A rapid review examining purchasing changes resulting from fiscal measures targeted at high sugar foods and sugar-sweetened drinks. Nutrition & diabetes 7(12): 302	- Systematic review. Included studies checked for eligibility. *Review population were mostly adults with one study conducted in children aged 12 to 14 years*
Roberts-Gray, C., Briley, M.E., Ranjit, N. et al. (2016) Efficacy of the Lunch is in the Bag intervention to increase parents' packing of healthy bag lunches for young children: A cluster-randomized trial in early care and education centers. International Journal of Behavioral Nutrition and Physical Activity 13(1): 3	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Robinson-O'Brien, R.; Story, M.; Heim, S. (2009) Impact of garden-based youth nutrition intervention programs: a review. Journal of the American Dietetic Association 109(2): 273-280	- Systematic review. Included studies checked for eligibility. *No studies identified for inclusion. Included studies had population >5 years*
Roe, Liane and Health Education, Authority (1997) Health promotion interventions to promote healthy eating in the general population : a review.	- Conference abstract *DARE critical abstract. Insufficient information to include in review*
Roe, LS, Meengs, JS, Birch, LL et al. (2013) Serving a variety of vegetables and fruit as a snack increased intake in preschool children. American journal of clinical nutrition 98(3): 693-699	- Ineligible intervention *Included in Hodder 2020 but intervention does not match protocol criteria. Compared exposure to fruits vs vegetables*
Rohde, J.F., Larsen, S.C., Angquist, L. et al. (2017) Effects of the Healthy Start randomized intervention on dietary intake among obesity-prone normal-weight children. Public health nutrition 20(16): 2988-2997	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Rohlfs Domínguez, Paloma, Gámiz, Fernando, Gil, Marta et al. (2013) Providing choice increases children's vegetable intake. Food Quality and Preference 30(2): 108-113	- Falls within the same date range as Cochrane systematic review (Hodder 2020)

Study	Code [Reason]
Rosario, R., Oliveira, B., Araujo, A. et al. (2012) The impact of an intervention taught by trained teachers on childhood overweight. International Journal of Environmental Research and Public Health 9(4): 1355-1367	- Ineligible population *Target population was children aged 6 to 12 years*
Rose, A.M., Wagner, A.K., Kennel, J.A. et al. (2014) Determining the feasibility and acceptability of a nutrition education and cooking program for preschoolers and their families delivered over the dinner hour in a low-income day care setting. Infant, Child, and Adolescent Nutrition 6(3): 144-151	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Rummo, P.E., Moran, A.J., Musicus, A.A. et al. (2020) An online randomized trial of healthy default beverages and unhealthy beverage restrictions on children's menus. Preventive Medicine Reports 20: 101279	- No outcomes of interest *Study only reported on calorie intake*
Rush, E, Reed, P, McLennan, S et al. (2012) A school-based obesity control programme: project Energize. Two-year outcomes. British journal of nutrition 107(4): 581-587	- No outcomes of interest *No outcome of interest. Outcome includes BMI SDS (standard deviation score). Study population include >5 year olds. Findings were stratified into 5-7 and 10-12 years.*
Ryan, Linda (1995) The Effect of Nutrition Education on Improving Fruit and Vegetable Consumption of Youth. Journal of Extension 33(5): n5	- Ineligible population *Included a whole school population. No mean age reported and results were not separated by age*
Sacher, P.M., Kolotourou, M., Chadwick, P.M. et al. (2010) Randomized controlled trial of the MEND program: A family-based community intervention for childhood obesty. Obesity 18(suppl1): 62-s68	- Ineligible population *Included children aged between 8 and 12 years*
Saladin, G, Provencher, HJ, Sévigny, J et al. (1982) Evaluation of a nutrition education program in kindergartens. Canadian journal of public health = revue canadienne de sante publique 73(2): 95-100	- Language not English *French*
Salazar G, Vasquez F, Concha F et al. (2014) Pilot nutrition and physical activity intervention for preschool children attending daycare centres (JUNJI); primary and secondary outcomes. Nutr. Hosp.: 1004-1012	- Ineligible study design *Non-RCT study and no outcomes of interest. Diet related outcomes include energy intake and fat intake*

Study	Code [Reason]
Salminen, M., Vahlberg, T., Ojanlatva, A. et al. (2005) Effects of a controlled family-based health education/counseling intervention. American Journal of Health Behavior 29(5): 395-406	- Ineligible population *Included children (6 to 17 years) and adolescents*
Sanders, LM, Perrin, EM, Yin, HS et al. (2014) "Greenlight study": a controlled trial of low-literacy, early childhood obesity prevention. Pediatrics 133(6): e1724-37	- No outcomes of interest
Sanigorski, A.M., Bell, A.C., Kremer, P.J. et al. (2008) Reducing unhealthy weight gain in children through community capacity-building: Results of a quasi-experimental intervention program, Be Active Eat Well. International Journal of Obesity 32(7): 1060-1067	- Ineligible population *Study lumped together children of ages 2 to 12 years and results were not presented separately by age. Mean age (SD) = 8.21 (2.26) and 8.34 (2.22) for intervention and control arma respectively*
Savage, J.S., Peterson, J., Marini, M. et al. (2013) The Addition of a plain or herb-flavored reduced-fat dip is associated with improved preschoolers' intake of vegetables. Journal of the Academy of Nutrition and Dietetics 113(8): 1090-1095	- Ineligible study design *Quasi experimental study design*
Savage, Jennifer S., Fisher, Jennifer O., Marini, Michele et al. (2012) Serving smaller age-appropriate entree portions to children aged 3-5 y increases fruit and vegetable intake and reduces energy density and energy intake at lunch. The American journal of clinical nutrition 95(2): 335-41	- Ineligible intervention *Included in Hodder 2020 but intervention does not meet protocol criteria. Intervention involved serving smaller age appropriate entrees*
Savage, JS, Paul, IM, Marini, ME et al. (2010) Pilot intervention promoting responsive feeding, the division of feeding responsibility, and healthy dietary choices during infancy. Appetite 3(54): 673	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Savoie-Roskos, Mateja R.; Wengreen, Heidi; Durward, Carrie (2017) Increasing Fruit and Vegetable Intake among Children and Youth through Gardening-Based Interventions: A Systematic Review. Journal of the Academy of Nutrition & Dietetics 117(2): 240-250	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Studies excluded due to ineligible population or study falls within the same date range as Hodder 2020*
Scantlebury, Rachel Jane, Moody, Alison, Oyebode, Oyinlola et al. (2018) Has the UK	- Ineligible study design

Study	Code [Reason]
Healthy Start voucher scheme been associated with an increased fruit and vegetable intake among target families? Analysis of Health Survey for England data, 2001-2014. Journal of epidemiology and community health 72(7): 623-629	*Secondary analysis of cross-sectional data retrieved from the Health Survey for England*
Schmitt, S.A., Bryant, L.M., Korucu, I. et al. (2019) The effects of a nutrition education curriculum on improving young children's fruit and vegetable preferences and nutrition and health knowledge. Public health nutrition 22(1): 28-34	- Ineligible population *Target population was children in 2nd grade (average 8 years old)*
Schroeder, N, Rushovich, B, Bartlett, E et al. (2015) Early Obesity Prevention: a Randomized Trial of a Practice-Based Intervention in 0-24-Month Infants. Journal of obesity 2015: 795859	- Domain not of interest *Study focuses on obesity prevention which is outside the remit of this guideline*
Schuler, BR, Fowler, B, Rubio, D et al. (2019) Building Blocks for Healthy Children: evaluation of a Child Care Center-Based Obesity Prevention Pilot Among Low-Income Children. Journal of nutrition education and behavior 51(8): 958-966	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Seguin, R.A., Morgan, E.H., Hanson, K.L. et al. (2017) Farm Fresh Foods for Healthy Kids (F3HK): An innovative community supported agriculture intervention to prevent childhood obesity in low-income families and strengthen local agricultural economies. BMC public health 17(1): 306	- Ineligible intervention *Study describing methodology of a trial*
Seguin-Fowler, R.A., Hanson, K.L., Jilcott Pitts, S.B. et al. (2021) Community supported agriculture plus nutrition education improves skills, self-efficacy, and eating behaviors among low-income caregivers but not their children: a randomized controlled trial. International Journal of Behavioral Nutrition and Physical Activity 18(1): 112	- Ineligible population *Population included children aged 2- 12 years and results were not separated by age. Mean age = 6.1 and 6.2 for intervention and control arms respectively. Intervention was community supported agriculture with nutrition education*
Segura-Perez S; Perez-Escamilla R; Damio G. (2017) Improving access to fresh fruit and vegetables among inner-city residents: the NEAT trial. FASEB Journal: No pagination.	- Conference abstract
Segura-Perez, Sofia; Damio, Grace; Perez-Escamilla, Rafael (2017) Improving access to	- Included in Cochrane systematic review (Hodder 2020)

Study	Code [Reason]
fresh fruit and vegetables among low income families in the USA: the neat trial. Annals of Nutrition and Metabolism 71: 841-841	
Shakir, A., Barngkgei, I., Godson, J. et al. (2021) Effectiveness of school-based behavioural interventions to improve children's oral health by reducing sugar intake and promoting oral hygiene: A rapid review of randomised controlled trials. Community dental health 38(4): 275-283	- Systematic review. Included studies checked for eligibility. *Studies included in the review do not meet inclusion criteria either because they were conducted in a LMIC or have the wrong population (children in 7th grade or above)*
Shariff, ZM, Bukhari, SS, Othman, N et al. (2008) Nutrition education intervention improves nutrition knowledge, attitude and practices of primary school children: a pilot study. International electronic journal of health education 11: 119-132	- Ineligible country *Not a high income country (defined by OECD) as specified in the protocol*
Sharma, M. (2011) Dietary education in school-based childhood obesity prevention programs. Advances in nutrition (Bethesda, Md.) 2(2): 207s-16s	- Systematic review. Included studies checked for eligibility. *Review focused on obesity prevention which is not the remit of this guideline. No additional studies identified for inclusion*
Sharma, S.V., Hedberg, A.M., Skala, K.A. et al. (2015) Feasibility and acceptability of a gardening-based nutrition education program in preschoolers from low-income, minority populations. Journal of Early Childhood Research 13(1): 93-110	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Sharma, Shreela V, Markham, Christine, Chow, Joanne et al. (2016) Evaluating a school-based fruit and vegetable co-op in low-income children: A quasi-experimental study. Preventive medicine 91: 8-17	- Ineligible population *Population included first grade children (Mean age 6.15)*
Sharma, Shreela; Chuang, Ru-Jye; Hedberg, Ann Marie (2011) Pilot-testing CATCH Early Childhood. American Journal of Health Education 42(1): 12-23	- Ineligible study design *Not RCT study*
Sharps, M and Robinson, E (2016) Encouraging children to eat more fruit and vegetables: health vs. descriptive social norm-based messages. Appetite 100: 18-25	- Ineligible population *Study included children 6 - 11 years*

Study	Code [Reason]
Sharps, MA; Thomas, E; Blissett, JM (2020) Using pictorial nudges of fruit and vegetables on tableware to increase children's fruit and vegetable consumption. Appetite 144: 104457	- Ineligible population *Study included children aged 5 to 13 years and findings were not presented by age*
Shelton, D., Le Gros, K., Norton, L. et al. (2007) Randomised controlled trial: A parent-based group education programme for overweight children. Journal of Paediatrics and Child Health 43(12): 799-805	- Ineligible intervention *Intervention included diet and PA components and outcomes of interest reported (BMI) are not solely diet-related. Also reported calorie intake*
Shemilt, I., Harvey, I., Shepstone, L. et al. (2004) A national evaluation of school breakfast clubs: evidence from a cluster randomized controlled trial and an observational analysis. Child: care, health and development 30(5): 413-27	- Ineligible population *Mean age 10.13 years. Study was a randomised trial but analysed as a cohort study*
Sherwood, NE, JaKa, MM, Crain, AL et al. (2015) Pediatric Primary Care-Based Obesity Prevention for Parents of Preschool Children: a Pilot Study. Childhood obesity (Print) 11(6): 674-682	- Domain not of interest *Included in Hodder systematic review but study focuses on obesity which is outside the remit of this guideline*
Shorey, S and Chan, V (2020) Effectiveness of healthy eating interventions among children: A quantitative systematic review. Journal of advanced nursing 77(2)	- Language not English *Chinese*
Silva, C., Fassnacht, D.B., Ali, K. et al. (2015) Promoting health behaviour in Portuguese children via Short Message Service: The efficacy of a text-messaging programme. Journal of health psychology 20(6): 806-815	- Ineligible population *Included children aged 8 to 10 years*
Silveira, J.A.C., Taddei, J.A.A.C., Guerra, P.H. et al. (2011) Effectiveness of school-based nutrition education interventions to prevent and reduce excessive weight gain in children and adolescents: A systematic review. Jornal de Pediatria 87(5): 382-392	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Individual studies were excluded due to ineligible population > 5 years*
Simell, O., Niinikoski, H., Ronnemaa, T. et al. (2009) Cohort profile: The STRIP study (Special Turku coronary risk factor intervention project), an infancy-onset dietary and life-style intervention trial. International Journal of Epidemiology 38(3): 650-655	- Ineligible study design *Description of sample and methods of the trial*

Study	Code [Reason]
Simons-Morton, B.G., Parcel, G.S., Baranowski, T. et al. (1991) Promoting physical activity and a healthful diet among children: Results of a school-based intervention study. American Journal of Public Health 81(8): 986-991	- Ineligible population *Included kindergarten to 4th grade students and results were not separated by age. No mean age reported.*
Sisson, S.B., Krampe, M., Anundson, K. et al. (2016) Obesity prevention and obesogenic behavior interventions in child care: A systematic review. Preventive Medicine 87: 57-69	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Awaiting FT of studies*
Sisson, S, Williams, B, Leidner, J et al. (2022) P097 Change in Vegetables, Fruit, and Sugar in Family Child Care Homes Lunches Following Happy Healthy Homes Intervention...Society for Nutrition Education and Behavior Annual Conference, 29-31 July, 2022, Atlanta, Georgia. Journal of nutrition education and behavior 54(7): 63	- Conference abstract
Skelton, Kara R., Lowe, Chenery, Zaltz, Daniel A. et al. (2020) Garden-based interventions and early childhood health: an umbrella review. International Journal of Behavioral Nutrition & Physical Activity 17(1): npag-npag	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Included review studies assessed for inclusion. 3 reviews focused on LMICs, 1 on physical activity and 8 were already identified and reviewed in the search process. The included studies of the other 4 reviews (Berti 2004, Davis 2015, Langelloto 2012 and Ohly 2016) were assessed for inclusion.*
Skouteris, H., McCabe, M., Swinburn, B. et al. (2010) Healthy eating and obesity prevention for preschoolers: a randomised controlled trial. BMC public health 10: 220	- No outcomes of interest *Describes trial methodology*
Slusser, W, Frankel, F, Robison, K et al. (2012) Pediatric overweight prevention through a parent training program for 2-4 year old Latino children. Childhood obesity (Print) 8(1): 52-59	- Ineligible intervention *Intervention included diet and physical activity components and outcomes (BMI) reported in children were not solely diet-related*
Smith, Kylie J, Breslin, Monique C, McNaughton, Sarah A et al. (2017) Skipping breakfast among Australian children and adolescents; findings from the 2011-12 National Nutrition and Physical Activity Survey. Australian and New Zealand journal of public health 41(6): 572-578	- Ineligible study design *Non-intervention study with a mixed population of children aged 2 to 17 years and results were not separated by age*

Study	Code [Reason]
Smith, L.H. and Holloman, C. (2013) Comparing the Effects of Teen Mentors to Adult Teachers on Child Lifestyle Behaviors and Health Outcomes in Appalachia. Journal of School Nursing 29(5): 386-396	- Ineligible population *3rd and 4th graders*
Smithers, L.G., Lynch, J., Hedges, J. et al. (2017) Diet and anthropometry at 2 years of age following an oral health promotion programme for Australian Aboriginal children and their carers: A randomised controlled trial. British Journal of Nutrition 118(12): 1061-1069	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Smithers, Lisa G., Lynch, John, Hedges, Joanne et al. (2017) Diet and anthropometry at 2 years of age following an oral health promotion programme for Australian Aboriginal children and their carers: a randomised controlled trial. The British journal of nutrition 118(12): 1061-1069	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Soltero, Erica G., Peña, Armando, Gonzalez, Veronica et al. (2021) Family-Based Obesity Prevention Interventions among Hispanic Children and Families: A Scoping Review. Nutrients 13(8): 2690	- Systematic review. Included studies checked for eligibility. *Population included children aged 5 to 13 years*
Sonneville, K.R., Rifas-Shiman, S.L., Kleinman, K.P. et al. (2012) Associations of obesogenic behaviors in mothers and obese children participating in a randomized trial. Obesity 20(7): 1449-1454	- Ineligible study design *Not an intervention study*
Spence, A.C., McNaughton, S.A., Lioret, S. et al. (2013) A health promotion intervention can affect diet quality in early childhood. Journal of Nutrition 143(10): 1672-1678	- Included in Cochrane systematic review (Hodder 2020) *Same study as Campbell 2013 in a different publication but has no additional outcome relevant to this review*
Spence, AC, Campbell, KJ, Crawford, DA et al. (2014) Mediators of improved child diet quality following a health promotion intervention: the Melbourne InFANT Program. International journal of behavioral nutrition and physical activity 11: 137	- Domain not of interest *Study focuses on obesity prevention which is outside the remit of this guideline*
Spill, Maureen K., Birch, Leann L., Roe, Liane S. et al. (2010) Eating vegetables first: the use of portion size to increase vegetable intake in	- Ineligible intervention

Study	Code [Reason]
preschool children. The American journal of clinical nutrition 91(5): 1237-43	*Included in Hodder 2020 but intervention does not meet protocol criteria for this review*
Spill, Maureen K., Birch, Leann L., Roe, Liane S. et al. (2011) Hiding vegetables to reduce energy density: an effective strategy to increase children's vegetable intake and reduce energy intake. The American journal of clinical nutrition 94(3): 735-41	- Ineligible intervention *Included in Hodder 2020 but intervention does not meet protocol criteria for this review*
Spill, Maureen K., Birch, Leann L., Roe, Liane S. et al. (2011) Serving large portions of vegetable soup at the start of a meal affected children's energy and vegetable intake. Appetite 57(1): 213-9	- Ineligible intervention *Included in Hodder 2020 but intervention does not meet protocol criteria for this review*
Spurrier, MB (2008) Preventing childhood obesity: the effects of nutritional education on increasing fruit and vegetable consumption in preschoolers. Preventing Childhood Obesity: The Effects of Nutritional Education on Increasing Fruit & Vegetable Consumption in Preschoolers: 53-53	- Dissertation or thesis
Stallings, T.L., Gazmararian, J.A., Goodman, M. et al. (2016) The Georgia WIC Farmers' Market Nutrition Program's Influence on Fruit and Vegetable Intake and Nutrition Knowledge and Competencies Among Urban African American Women and Children. Journal of Hunger and Environmental Nutrition 11(1): 86-101	- Ineligible study design *Non-randomised study with intervention and control groups*
Stark, L.J., Spear, S., Boles, R. et al. (2011) A pilot randomized controlled trial of a clinic and home-based behavioral intervention to decrease obesity in preschoolers. Obesity 19(1): 134-141	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Steenbock, B, Buck, C, Zeeb, H et al. (2019) Impact of the intervention program "JolinchenKids - fit and healthy in daycare" on energy balance related-behaviors: results of a cluster controlled trial. BMC pediatrics 19(1): 432	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Stock, S, Miranda, C, Evans, S et al. (2007) Healthy Buddies: a novel, peer-led health promotion program for the prevention of obesity and eating disorders in children in elementary school. Pediatrics 120(4): e1059-68	- Conference abstract

Study	Code [Reason]
Stookey, J.D., Evans, J., Chan, C. et al. (2017) Healthy apple program to support child care centers to alter nutrition and physical activity practices and improve child weight: a cluster randomized trial. BMC public health 17(1): 965	- Ineligible intervention *Intervention included diet and physical activity components and outcomes (BMI) reported in children were not solely diet-related*
Story, M, Hannan, PJ, Fulkerson, JA et al. (2012) Bright Start: description and main outcomes from a group-randomized obesity prevention trial in American Indian children. Obesity (Silver Spring, Md.) 20(11): 2241-2249	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Strauss, A, Herbert, B, Mitschek, C et al. (2011) TigerKids. Successful health promotion in preschool settings. Bundesgesundheitsblatt, Gesundheitsforschung, Gesundheitsschutz 54(3): 322-329	- Language not English *German*
Summerbell, C D, Moore, H J, Vogele, C et al. (2012) Evidence-based recommendations for the development of obesity prevention programs targeted at preschool children. Obesity reviews : an official journal of the International Association for the Study of Obesity 13suppl1: 129-32	- Domain not of interest *Focused on obesity prevention whichh is outside the remit of this guideline*
Summerbell, Carolyn; Moore, Helen; O'Malley, Claire (2014) Consequences and determinants of poor nutrition in children aged 0-3 years, and public health interventions that may improve dietary intake: a general review. Journal of Children's Services 9(2): 128-142	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Studies were excluded because they focused on obesity prevention or were non-interventions studies*
Sun, A, Cheng, J, Bui, Q et al. (2017) Home-Based and Technology-Centered Childhood Obesity Prevention for Chinese Mothers With Preschool-Aged Children. Journal of transcultural nursing : official journal of the transcultural nursing society 28(6): 616-624	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Sweitzer, S.J., Briley, M.E., Roberts-Gray, C. et al. (2011) Psychosocial outcomes of lunch is in the bag, a parent program for packing healthful lunches for preschool children. Journal of Nutrition Education and Behavior 43(6): 536-542	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Sweitzer, SJ, Ranjit, N, Calloway, EE et al. (2016) Examining How Adding a Booster to a Behavioral Nutrition Intervention Prompts Parents to Pack More Vegetables and Whole	- Falls within the same date range as Cochrane systematic review (Hodder 2020)

Study	Code [Reason]
Gains in Their Preschool Children's Sack Lunches. Behavioral medicine (Washington, D.C.) 42(1): 9-17	
Tabak RG, Tate DF, Stevens J et al. (2011) Family ties to health study: a randomized intervention to improve vegetable intake in children. Obesity : S109.	- Conference abstract
Tak, Nannah I; Te Velde, Saskia J; Brug, Johannes (2009) Long-term effects of the Dutch Schoolgruiten Project--promoting fruit and vegetable consumption among primary-school children. Public health nutrition 12(8): 1213-23	- Ineligible population *Study included children in 4th grade (9-10 years)*
Taveras, EM, Gortmaker, SL, Hohman, KH et al. (2011) Randomized controlled trial to improve primary care to prevent and manage childhood obesity: the High Five for Kids study. Archives of pediatrics & adolescent medicine 165(8): 714-722	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Taverno Ross, Sharon E, Barone Gibbs, Bethany, Documet, Patricia I et al. (2018) ANDALE Pittsburgh: results of a promotora-led, home-based intervention to promote a healthy weight in Latino preschool children. BMC public health 18(1): 360	- Ineligible study design *Before and after study design*
Taylor, C.; Upton, P.; Upton, D. (2015) Increasing primary school children's fruit and vegetable consumption: A review of the food dudes programme. Health Education 115(2): 178-196	- Ineligible population *Review included children aged 4 to 11 years*
Taylor, Charlotte, Darby, Helena, Upton, Penney et al. (2013) Can a school-based intervention increase children's fruit and vegetable consumption in the home setting?. Perspectives in Public Health 133(6): 330-336	- Ineligible population *Children aged 4 to 11 years. No mean age reported and results were not separated by age*
Taylor, J.C., Zidenberg-Cherr, S., Linnell, J.D. et al. (2018) Impact of a multicomponent, school-based nutrition intervention on students' lunchtime fruit and vegetable availability and intake: A pilot study evaluating the Shaping Healthy Choices Program. Journal of Hunger and Environmental Nutrition 13(3): 415-428	- Ineligible population *Target population was children in 4th grade*

Study	Code [Reason]
Tedstone, A., Aviles, M., Shetty, P. et al. (1998) Effectiveness of interventions to promote healthy eating in preschool children aged 1 to 5 years: a review. Health Promotion Effectiveness Reviews 10	- Ineligible study design *Non-RCT study*
Thomas, J., Sutcliffe, K., Harden, A. et al. (2003) Children and Healthy Eating: A systematic review of barriers and facilitators.	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion*
Thompson, D.A., Joshi, A., Hernandez, R.G. et al. (2012) Nutrition education via a touchscreen: A randomized controlled trial in Latino immigrant parents of infants and toddlers. Academic Pediatrics 12(5): 412-419	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Thomson, C.A. and Ravia, J. (2011) A Systematic Review of Behavioral Interventions to Promote Intake of Fruit and Vegetables. Journal of the American Dietetic Association 111(10): 1523-1535	- Systematic review. Included studies checked for eligibility. *Review focused on an adult population*
Tomayko, E.J., Prince, R.J., Cronin, K.A. et al. (2019) The Healthy Children, Strong Families 2 (HCSF2) Randomized Controlled Trial Improved Healthy Behaviors in American Indian Families with Young Children. Current Developments in Nutrition 3(supplement2): 53-62	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Tomayko, EJ, Prince, RJ, Cronin, KA et al. (2016) The Healthy Children, Strong Families intervention promotes improvements in nutrition, activity and body weight in American Indian families with young children. Public health nutrition 19(15): 2850-2859	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Tomayko, EJ, Prince, RJ, Cronin, KA et al. (2017) Healthy Children, Strong Families 2: a randomized controlled trial of a healthy lifestyle intervention for American Indian families designed using community-based approaches. Clinical trials (London, England) 14(2): 152-161	- Ineligible study design *Presents description of methodology and rationale for trial.*
Touyz, Lauren M, Wakefield, Claire E, Grech, Allison M et al. (2018) Parent-targeted home-based interventions for increasing fruit and vegetable intake in children: a systematic review and meta-analysis. Nutrition Reviews 76(3): 154-173	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Individual studies relevant to the review have been included as individual studies or are*

Study	Code [Reason]
	included in Hodder 2020. Studies were excluded because population included children aged >5 years, conducted in a LMIC or were non-RCTs
Tran, B.X., Ohinmaa, A., Kuhle, S. et al. (2014) Life course impact of school-based promotion of healthy eating and active living to prevent childhood obesity. PLoS ONE 9(7): e102242	- Ineligible study design *Non-intervention study. Also, target population was children aged 10 to 11 years*
Trost, Stewart G.; Fees, Bronwyn; Dzewaltowski, David (2008) Feasibility and efficacy of a "move and learn" physical activity curriculum in preschool children. Journal of physical activity & health 5(1): 88-103	- Unable to find full text *Library unable to supply full text*
Tucker, J.M., Defrang, R., Orth, J. et al. (2019) Evaluation of a primary care weight management program in children aged 2-5 years: Changes in feeding practices, health behaviors, and body mass index. Nutrients 11(3): 498	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Van Cauwenberghe, E., Maes, L., Spittaels, H. et al. (2010) Effectiveness of school-based interventions in Europe to promote healthy nutrition in children and adolescents: Systematic review of published and grey literature. British Journal of Nutrition 103(6): 781-797	- Systematic review. Included studies checked for eligibility. *Review focused on children aged 6 to 18 years. No additional studies identified for inclusion. Individual studies had populations >5 years*
van der Horst, Klazine, Mathias, Kevin C., Prieto Patron, Alberto et al. (2019) Art on a Plate: A Pilot Evaluation of an International Initiative Designed to Promote Consumption of Fruits and Vegetables by Children. Journal of Nutrition Education & Behavior 51(8): 919-919	- Ineligible population *Population included children aged 4 to 14 (Mean age 8.4) years from both HICs and LMICs*
van Grieken, A., Renders, C.M., Veldhuis, L. et al. (2014) Promotion of a healthy lifestyle among 5-year-old overweight children: health behavior outcomes of the 'Be active, eat right' study. BMC public health 14: 59	- Ineligible population *Participants included children aged 5 years, but outcomes measured at 7 years*
van Grieken, A., Vlasblom, E., Wang, L. et al. (2017) Personalized Web-Based Advice in Combination With Well-Child Visits to Prevent Overweight in Young Children: Cluster Randomized Controlled Trial. Journal of medical Internet research 19(7): e268	- Falls within the same date range as Cochrane systematic review (Hodder 2020)

Study	Code [Reason]
Vandeweghe, Laura, Verbeken, Sandra, Moens, Ellen et al. (2016) Strategies to improve the Willingness to Taste: The moderating role of children's Reward Sensitivity. Appetite 103: 344-352	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Vargas-Garcia, EJ, Evans, CEL, Prestwich, A et al. (2017) Interventions to reduce consumption of sugar-sweetened beverages or increase water intake: evidence from a systematic review and meta-analysis. Obesity reviews : an official journal of the International Association for the Study of Obesity 18(11): 1350-1363	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Individual studies relevant to the review have been included as individual studies or are included in Hodder 2020*
Varman, SD, Cliff, DP, Jones, RA et al. (2021) Experiential Learning Interventions and Healthy Eating Outcomes in Children: A Systematic Literature Review. International journal of environmental research and public health 18(20)	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Individual studies relevant to the review have been included as individual studies or are included in Hodder 2020*
Vercammen, KA, Frelier, JM, Lowery, CM et al. (2018) A systematic review of strategies to reduce sugar-sweetened beverage consumption among 0-year to 5-year olds. Obesity reviews : an official journal of the International Association for the Study of Obesity 19(11): 1504-1524	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Verdonschot, A, Follong, BM, Collins, CE et al. (2022) Effectiveness of school-based nutrition intervention components on fruit and vegetable intake and nutrition knowledge in children aged 4-12 years old: an umbrella review. Nutrition reviews	- Systematic review. Included studies checked for eligibility. *Included 8 SRs that are already included in the review and have been assessed for inclusion with individual studies assessed*
Verjans-Janssen, S.R.B., Van De Kolk, I., Van Kann, D.H.H. et al. (2018) Effectiveness of school-based physical activity and nutrition interventions with direct parental involvement on children's BMI and energy balance-related behaviors - A systematic review. PLoS ONE 13(9): e0204560	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Review included studies with populations > 5 years or fall within the same date range as Hodder 2020*
Vitolo, MR, Bortolini, GA, Feldens, CA et al. (2005) Impacts of the 10 Steps to Healthy Feeding in Infants: a randomized field trial. Cadernos de saude publica 21(5): 1448-1457	- Language not English *Portuguese*

Study	Code [Reason]
Wagner, Meredith and Rhee, Y. (2013) Community-based Nutrition Education Improves Knowledge, Attitudes, and Behaviors Related to Fruit and Vegetable Consumption. Journal of Nutrition Education & Behavior 45(4supplement): 39-s39	- Conference abstract
Wahi, G., de Souza, R.J., Hartmann, K. et al. (2021) Effectiveness of programs aimed at obesity prevention among Indigenous children: A systematic review. Preventive Medicine Reports 22: 101347	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Studies included populations with mean age > 5 years*
Wald, E.R., Ewing, L.J., Moyer, S.C.L. et al. (2018) An Interactive Web-Based Intervention to Achieve Healthy Weight in Young Children. Clinical Pediatrics 57(5): 547-557	- Ineligible population *Study had an overlapping population of children aged 3 to 7 years*
Ward, Dianne S., Benjamin, Sara E., Ammerman, Alice S. et al. (2008) Nutrition and physical activity in child care: results from an environmental intervention. American journal of preventive medicine 35(4): 352-6	- No outcomes of interest *Outcome was total nutrition using the Environment and Policy Assessment and Observation (EPAO) instrument*
Ward, S, Bélanger, M, Donovan, D et al. (2015) Systematic review of the relationship between childcare educators' practices and preschoolers' physical activity and eating behaviours. Obesity reviews : an official journal of the International Association for the Study of Obesity 16(12): 1055-70	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Studies were excluded because they focused on physical activity, had no outcome of interest or had ineligible study designs*
Ward, Stephanie, Bélanger, Mathieu, Donovan, Denise et al. (2015) Childcare Educators' Influence on Physical Activity and Eating Behaviours of Preschool Children: A Systematic Review. Canadian Journal of Diabetes 39: 73-s73	- Conference abstract
Wardle, J., Herrera, M. L., Cooke, L. et al. (2003) Modifying children's food preferences: the effects of exposure and reward on acceptance of an unfamiliar vegetable. European journal of clinical nutrition 57(2): 341-8	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Wardle, J and Huon, G (2000) An experimental investigation of the influence of health	- Ineligible population *Included children age 9 to 11 years*

Study	Code [Reason]
information on children's taste preferences. Health education research 15(1): 39-44	
Warren, JM, Henry, CJ, Lightowler, HJ et al. (2003) Evaluation of a pilot school programme aimed at the prevention of obesity in children. Health promotion international 18(4): 287-296	- Ineligible population *Included children 5-7 (mean/SD 6.1/0.6) years*
Waters, E, Gibbs, L, Tadic, M et al. (2017) Cluster randomised trial of a school-community child health promotion and obesity prevention intervention: findings from the evaluation of fun 'n healthy in Moreland!. BMC public health 18(1): 92	- Ineligible population *Mixed population (5-12 years). No mean age and findings were not separated by age*
Watt R, Dowler E, Hardy R et al. (2006) Promoting recommended infant feeding practices in a low-income sample – randomised controlled trial of a peer support intervention.	- Conference abstract *Meeting paper*
Webber, K.J. and Loescher, L.J. (2013) A systematic review of parent role modeling of healthy eating and physical activity for their young African American children. Journal for Specialists in Pediatric Nursing 18(3): 173-188	- Systematic review. Included studies checked for eligibility. *Individual studies do not meet the inclusion criteria for this review either because they have used a non-randomised study design or have targeted a population not relevant to this review (mostly children > 5years)*
Wen, Li Ming, Baur, Louise A., Simpson, Judy M. et al. (2012) Effectiveness of home based early intervention on children's BMI at age 2: randomised controlled trial. BMJ (Clinical research ed.) 344: e3732	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Wen, Li Ming, Baur, Louise A., Simpson, Judy M. et al. (2012) Effectiveness of home based early intervention on children's BMI at age 2: randomised controlled trial. BMJ (Clinical research ed.) 344: e3732	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Wen, LM, Baur, LA, Simpson, JM et al. (2015) Sustainability of Effects of an Early Childhood Obesity Prevention Trial Over Time: a Further 3-Year Follow-up of the Healthy Beginnings Trial. JAMA pediatrics 169(6): 543-551	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Wengreen, HJ, Joyner, D, Kimball, SS et al. (2021) A Randomized Controlled Trial Evaluating the FIT Game's Efficacy in	- Ineligible population

Study	Code [Reason]
Increasing Fruit and Vegetable Consumption. Nutrients 13(8)	*Population included children aged 5 to 11 years and results were not presented separately by age. Mean age not reported.*
Whitaker, RC, Wright, JA, Koepsell, TD et al. (1994) Randomized intervention to increase children's selection of low-fat foods in school lunches. Journal of pediatrics 125(4): 535-540	- Ineligible population *No information on age of children, but all were from elementary schools, which are likely to be from age 5 or 6.*
Whiteside-Mansell, Leanne and Swindle, Taren M (2019) Evaluation of Together We Inspire Smart Eating: pre-school fruit and vegetable consumption. Health education research 34(1): 62-71	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Williams, A., de Vlieger, N., Young, M. et al. (2018) Dietary outcomes of overweight fathers and their children in the Healthy Dads, Healthy Kids community randomised controlled trial. Journal of human nutrition and dietetics : the official journal of the British Dietetic Association 31(4): 523-532	- Ineligible population *Target population was children aged 5 to 12 years and results were not presented separately by age. Mean ages were 8.4 for control group and 7.9 for intervention group*
Williams, C.L., Bollella, M.C., Strobino, B.A. et al. (2002) "Healthy-Start": Outcome of an intervention to promote a heart healthy diet in preschool children. Journal of the American College of Nutrition 21(1): 62-71	- Unable to find full text *Library unable to supply full text*
Williams, Christine L., Strobino, Barbara A., Bollella, Marguerite et al. (2004) Cardiovascular risk reduction in preschool children: the "Healthy Start" project. Journal of the American College of Nutrition 23(2): 117-23	- Unable to find full text *Library unable to supply full text*
Williams, P.A., Cates, S.C., Blitstein, J.L. et al. (2014) Nutrition-education program improves preschoolers' at-home diet: A group randomized trial. Journal of the Academy of Nutrition and Dietetics 114(7): 1001-1008	- Included in Cochrane systematic review (Hodder 2020) *No additional relevant outcomes. Included use of low-fat/fat-free milk*
Williams, P.A., Cates, S.C., Blitstein, J.L. et al. (2015) Evaluating the Impact of Six Supplemental Nutrition Assistance Program Education Interventions on Children's At-Home Diets. Health education & behavior : the official publication of the Society for Public Health Education 42(3): 329-338	- Falls within the same date range as Cochrane systematic review (Hodder 2020)

Study	Code [Reason]
Wilson, T.A., Liu, Y., Adolph, A.L. et al. (2019) Behavior Modification of Diet and Parent Feeding Practices in a Community- Vs Primary Care-Centered Intervention for Childhood Obesity. Journal of nutrition education and behavior 51(2): 150-161	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Witt, K.E. and Dunn, C. (2012) Increasing Fruit and Vegetable Consumption among Preschoolers: Evaluation of Color Me Healthy. Journal of Nutrition Education and Behavior 44(2): 107-113	- No analysable data *included in Hodder 2020 but data not presented in analysable format*
Woo Baidal, Jennifer A, Nelson, Candace C, Perkins, Meghan et al. (2017) Childhood obesity prevention in the women, infants, and children program: Outcomes of the MA-CORD study. Obesity (Silver Spring, Md.) 25(7): 1167-1174	- Domain not of interest *Focused on obesity prevention which is outside the remit of this guideline*
Wood, Lara, Wolff, Cindy, Bianco-Simeral, Stephanie et al. (2011) Impact of a Kindergarten through Eighth-Grade Nutrition Education Program on Student, Teacher, and Schoolwide Practices. Journal of Nutrition Education & Behavior 43(4supplement2): 145-7	- Ineligible population *Mixed population from kindergarten to 8th grade and results were not separated by age. Mean age not reported*
Wright, JA, Whiteley, JA, Watson, BL et al. (2018) Tailored communications for obesity prevention in pediatric primary care: a feasibility study. Health education research 33(1): 14-25	- Ineligible population *Population included children aged 4 to 10 (Mean 7.4) years and results were not separated for children 4-5 years*
Wyse R; Wolfenden L; Bisquera A. (2015) Characteristics of the home food environment that mediate immediate and sustained increases in child fruit and vegetable consumption: mediation analysis from the Healthy Habits cluster randomised controlled trial. International Journal of Behavioral Nutrition and Physical Activity: 118	- Included in Cochrane systematic review (Hodder 2020) *Same study as Wyse 2012 in a different publication and has no additional outcomes relevant to this review. Measured children's fruit and vegetable consumption assessed using the fruit and vegetable subscale of the Children's Dietary Questionnaire*
Wyse R, Wolfenden L, Campbell E et al. (2011) Increasing fruit and vegetable consumption in 3-5 year old children: results from a cluster randomised controlled trial of a telephone-based parent intervention, Hunter region, NSW, Australia. Obesity Reviews: 68.	- Conference abstract

Study	Code [Reason]
Wyse, R., Campbell, K.J., Brennan, L. et al. (2014) A cluster randomised controlled trial of a telephone-based intervention targeting the home food environment of preschoolers (The Healthy Habits Trial): the effect on parent fruit and vegetable consumption. The international journal of behavioral nutrition and physical activity 11: 144	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Wyse, R., Delaney, T., Gibbins, P. et al. (2019) Cluster randomised controlled trial of an online intervention to improve healthy food purchases from primary school canteens: A study protocol of the 'click & crunch' trial. BMJ Open 9(9): e030538	- Ineligible study design *Study protocol*
Wyse, R., Wolfenden, L., Campbell, E. et al. (2011) A pilot study of a telephone-based parental intervention to increase fruit and vegetable consumption in 3-5-year-old children. Public health nutrition 14(12): 2245-2253	- Ineligible study design *Pre and post test design. No control group*
Wyse, R, Gabrielyan, G, Wolfenden, L et al. (2019) Can changing the position of online menu items increase selection of fruit and vegetable snacks? A cluster randomized trial within an online canteen ordering system in Australian primary schools. American journal of clinical nutrition 109(5): 1422-1430	- Ineligible population *Included whole school population with no age reported*
Wyse, R, Stacey, F, Campbell, L et al. (2020) 5-Year Follow-Up of a Telephone Intervention to Increase Fruit and Vegetable Consumption in Preschoolers: the 'Healthy Habits' Cluster Randomised Trial. Nutrients 12(12)	- No outcomes of interest *Reported outcomes measured at 5-years post-baseline follow up*
Yee, A.Z.H.; Lwin, M.O.; Ho, S.S. (2017) The influence of parental practices on child promotive and preventive food consumption behaviors: A systematic review and meta-analysis. International Journal of Behavioral Nutrition and Physical Activity 14(1): 47	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Yeh, Y., Hartlieb, K.B., Danford, C. et al. (2018) Effectiveness of Nutrition Intervention in a Selected Group of Overweight and Obese African-American Preschoolers. Journal of racial and ethnic health disparities 5(3): 553-561	- Falls within the same date range as Cochrane systematic review (Hodder 2020)

Study	Code [Reason]
Yoong, SL, Grady, A, Seward, K et al. (2019) The Impact of a Childcare Food Service Intervention on Child Dietary Intake in Care: an Exploratory Cluster Randomized Controlled Trial. American journal of health promotion 33(7): 991-1001	- Ineligible study design *Cross-sectional study design*
Yoong, SL, Lum, M, Jones, J et al. (2020) A systematic review of interventions to improve the dietary intake, physical activity and weight status of children attending family day care services. Public health nutrition 23(12): 1-10	- Systematic review. Included studies checked for eligibility. *No additional studies identified for inclusion. Studies included were non-RCTs*
Young, Laura, Anderson, Jennifer, Beckstrom, Leslie et al. (2003) Making new foods fun for kids. Journal of nutrition education and behavior 35(6): 337-8	- Ineligible study design *Non-randomised controlled trial*
Young, Laura, Anderson, Jennifer, Beckstrom, Leslie et al. (2004) Using social marketing principles to guide the development of a nutrition education initiative for preschool-aged children. Journal of nutrition education and behavior 36(5): 250-7	- No outcomes of interest *Study describes the development of a nutritional education intervention. No results presented*
Zask, A., Adams, J.K., Brooks, L.O. et al. (2012) Tooty Fruity Vegie: an obesity prevention intervention evaluation in Australian preschools. Health promotion journal of Australia : official journal of Australian Association of Health Promotion Professionals 23(1): 10-15	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Zask, Avigdor, Barnett, Lisa M., Rose, Lauren et al. (2012) Three year follow-up of an early childhood intervention: is movement skill sustained?. The international journal of behavioral nutrition and physical activity 9: 127	- Ineligible study design *Not a randomised trial and focused on obesity prevention which is outside the remit of this guideline*
Zeinstra, Gertrude G., Renes, Reint J., Koelen, Maria A. et al. (2010) Offering choice and its effect on Dutch children's liking and consumption of vegetables: a randomized controlled trial. The American Journal of Clinical Nutrition 91(2): 349-356	- Falls within the same date range as Cochrane systematic review (Hodder 2020)
Zheng, M., Hesketh, K.D., McNaughton, S.A. et al. (2022) Quantifying the overall impact of an early childhood multi-behavioural lifestyle intervention. Pediatric Obesity 17(3): e12861	- No outcomes of interest *Intervention included diet and physical activity components and outcomes (lifestyle patterns) reported in children were not solely diet-related*

Study	Code [Reason]
Zhou, Y.E., Emerson, J.S., Levine, R.S. et al. (2014) Childhood obesity prevention interventions in childcare settings: systematic review of randomized and nonrandomized controlled trials. American journal of health promotion : AJHP 28(4): e92-e103	- Domain not of interest *Study focused on obesity prevention which is not the remit of this guideline*
Øvrebø, B, Stea, TH, Te Velde, SJ et al. (2019) A comprehensive multicomponent school-based educational intervention did not affect fruit and vegetable intake at the 14-year follow-up. Preventive medicine 121: 79-85	- Ineligible population *Participants were 6th and 7th graders*

Economic studies

Table 57: Excluded economic studies

Study	Reason for exclusion
Di Noia J, Monica D, Jensen HH, Sikorskii A. Economic evaluation of a farm-to-Special Supplemental Nutrition Programme for Women, Infants and Children intervention promoting vegetable consumption. Public Health Nutr. 2021; 24(12):3922-3928.	Different study population (healthy adults)
Döring N, Zethraeus N, Tynelius P, de Munter J, Sonntag D, Rasmussen F. Economic Evaluation of PRIMROSE-A Trial-Based Analysis of an Early Childhood Intervention to Prevent Obesity. Front Endocrinol (Lausanne). 2018 Mar 14;9:104.	Intervention focused on prevention of childhood obesity
Gulliford MC, Bhattarai N, Charlton J, Rudisill C. Cost-effectiveness of a universal strategy of brief dietary intervention for primary prevention in primary care: population-based cohort study and Markov model. Cost Eff Resour Alloc. 2014 Feb 2;12(1):4.	Different study population (healthy adults)
Hayes A, Lung T, Wen LM, Baur L, Rissel C, Howard K. Economic evaluation of "healthy beginnings" an early childhood intervention to prevent obesity. Obesity (Silver Spring). 2014 Jul;22(7):1709-15.	Intervention focused on prevention of childhood obesity
Killedar A, Wen LM, Tan EJ, Marshall S, Taki S, Buchanan L, Rissel C, Xu H, Baur LA, Hayes A. Economic evaluation of the Communicating Healthy Beginnings Advice by Telephone trial for early childhood obesity prevention. Obesity (Silver Spring). 2022; 30(11):2256-2264.	Intervention focused on prevention of childhood obesity
Lee JY, Rozier RG, Norton EC, Kotch JB, Vann WF Jr. The effects of the Women, Infants, and Children's Supplemental Food Program on dentally related Medicaid expenditures. J Public Health Dent. 2004; 64(2):76-81.	Intervention costs not considered – study considered exclusively costs associated with dental care
Mande J, Flaherty G. Supplemental Nutrition Assistance Program as a health intervention. Curr Opin Pediatr. 2023 Feb 1;35(1):33-38.	No costs reported
McEachan RR, Santorelli, G., Bryant, M. et al. The HAPPY (Healthy and Active Parenting Programme for early Years) feasibility randomised control trial: acceptability and feasibility of an intervention to reduce infant obesity. BMC Public Health 2016; 16:211.	Intervention initiated during the antenatal period
Reeves P, Edmunds K, Szewczyk Z, Grady A, Yoong SL, Wolfenden L, Wyse R, Finch M, Stacey F, Wiggers J, Searles A. Economic evaluation of	Intervention targeted to childcare services

Study	Reason for exclusion
a web-based menu planning intervention to improve childcare service adherence with dietary guidelines. Implement Sci. 2021 Jan 7;16(1):1.	regarding provision of healthy menus – outcomes focused on change in menus offered, no outcomes on children were measured
Saha S, Gerdtham UG, Johansson P. Economic evaluation of lifestyle interventions for preventing diabetes and cardiovascular diseases. Int J Environ Res Public Health. 2010 Aug;7(8):3150-95.	SR of interventions for different study population (school-aged children and adults)
Sari N, Muhajarine N, Froehlich Chow A. The Saskatchewan/New Brunswick Healthy Start-Départ Santé intervention: implementation cost estimates of a physical activity and healthy eating intervention in early learning centers. BMC Health Serv Res. 2017 Jan 19;17(1):57.	Only implementation costs estimated, no outcomes or cost-savings resulting from implementation
Seguin-Fowler RA, Hanson KL, Jilcott Pitts SB, Kolodinsky J, Sitaker M, Ammerman AS, Marshall GA, Belarmino EH, Garner JA, Wang W. Community supported agriculture plus nutrition education improves skills, self-efficacy, and eating behaviors among low-income caregivers but not their children: a randomized controlled trial. Int J Behav Nutr Phys Act. 2021;18(1):112.	No costs reported
Tan EJ, Taylor RW, Taylor BJ, Brown V, Hayes AJ. Cost-Effectiveness of a Novel Sleep Intervention in Infancy to Prevent Overweight in Childhood. Obesity (Silver Spring, Md.). 2020;28(11):2201-2208.	Although the RCT included an intervention promoting healthy eating arm, this was not considered in the economic analysis
Wen LM, Baur LA, Rissel C, Flood V, Simpson JM, Hayes A, Hardy LL, Wardle K. Healthy Beginnings Trial Phase 2 study: follow-up and cost-effectiveness analysis. Contemp Clin Trials. 2012;33(2):396-401.	Study protocol

Appendix K Research recommendations – full details

Research recommendations for review question: What interventions are effective to promote healthy eating and drinking practices, including complementary feeding, in children from 12 months to 5 years (in line with government advice)?

No research recommendations were made for this review question.

Appendix L Additional information

The table below provides information on the studies included in Hodder 2020 systematic review that were included in this review. Additional outcomes from these studies not reported in Hodder 2020 but included in this review are also listed and data extraction was completed for the studies providing this data. See relevant outcome data in the evidence tables in Appendix D.

Table 58: Additional table for details of studies included from Hodder 2020 systematic review

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
Blissett 2016 RCT UK	Prompting no modelling: Physical prompts to eat the novel fruit (NF) Prompting and modelling: As well as using physical prompts as in PNM, caregivers were also asked to try the NF themselves. Modelling 'control' group: No information about prompting, but asked to taste the NF themselves."	N=120 parent-child dyads	Prompting no modelling: 27 months Prompting and modelling: 29 months Modelling 'control' group: 31 months	Prompting no modelling: 34 Prompting and modelling: 26 Modelling 'control' group: 35	NR	NR	NR	Outcome relating to children's fruit and vegetable consumption
Cooke 2011 Cluster RCT UK	Exposure + tangible non-food reward: Children were told that if they tasted the vegetable, they could choose a sticker as a reward.	16 classes, N=422 children	Reception (4 to 5 years), n=216 Year 1 (5 to 6 years): n=206	NR	NR	NR	NR	Outcome relating to children's fruit and vegetable consumption

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
	Exposure + social reward: Children were praised if they tasted the vegetable Exposure alone: Children were invited to taste the target vegetable but received minimal social interaction.							
Cravener 2015 RCT USA	Intervention: Vegetables packaged in containers decorated with their four favourite cartoon characters (selected on the first visit) and granola bars in generic packaging. All vegetable packages contained sticker incentives and children could collect stickers on a special game board and trade them for small prizes at the end of the study. This was done to simulate the concept of promotions that often come with packaged foods. Parents were in charge of deciding when children had eaten enough of a vegetable to be awarded the sticker for their game boards. Control:	N=24 children	Intervention: 3.8 years Control: 4.0 years	NR	White: 92%	NR	NR	Outcome relating to children's fruit and vegetable consumption

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
	Children received weekly supplies of generic-packaged vegetables and granola bars presented as part of a free choice at meals and snacks,							
Daniels 2014, Daniels 2015, Magarey 2016 RCT Australia	Intervention: First intervention module (immediately after baseline, children aged 4-7 months) Second intervention module (6 months after completion of the first, children aged 13-16 months) Each module comprised six interactive group sessions (10-15 mothers per group, total 40 groups) of 1-1.5 hours duration, co-facilitated by a dietitian (n=13) and psychologist (n=13). Developmentally appropriate content addressed: (i) repeated neutral exposure to unfamiliar foods combined with limiting exposure to unhealthy foods to promote healthy food preferences (ii) responsive feeding that recognises and responds appropriately to cues of hunger and satiety to	N=698 mother-infant dyads	Intervention: 4.3 months Control: 4.3 months	Intervention: 30.2 years Control: 29.9 years	NR	SEIFA Index of Relative Advantage and Disadvantage (relative disadvantages ≤ 7th decile): 33%	Parent education (university degree): 59%	Non milk sweetened beverages (fruit juice, cordial, carbonated drinks) Child Dietary Questionnaire (CDQ) Outcome relating to children's fruit and vegetable consumption BMI for age z-score

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
	promote self-regulation of energy intake to need. (iii) "feeding is parenting" and positive parenting (encouragement of autonomy, warmth, self-efficacy). Control: Access to universal community child health services (could include child weighing and web/telephone based information, only with the mother's initiative). Control group did not receive anticipatory guidance but sought advice on specific problems.							
De Coen 2012 Cluster RCT Belgium	Intervention: The intervention was based on the 'Nutrition and Physical Activity Health Targets' of the Flemish Community clustered into: (i) increasing daily consumption of water and decreasing soft drinks consumption (ii) increasing daily milk consumption	31 schools, N=1589 children	Intervention: 4.86 years Control: 5.04 years	NR	NR	Intervention (lower SES): 34% Control (lower SES): 29%	NR	Sugar sweetened beverage intake Outcome relating to children's fruit and vegetable consumption BMI z-score

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
	(iii) increasing daily consumption of vegetables and fruit (iv) decreasing daily consumption of sweets and savoury snacks (v) increasing daily PA and decreasing screen-time behaviour. The intervention was targeted to the community, schools, parents, and the regional health boards through different intervention materials. Control: NR							
Duncanson 2013 RCT Australia	Intervention: Dissemination of the Tummy Rumbles interactive CD and the Raising Children DVD at baseline in September 2009, accompanied by written instructions for optimal use. The only prompt provided to parents to use the resources was a reminder note delivered by post with the 3-month follow-up surveys. The tummy rumbles interactive nutrition	N=146 parents	Intervention: 4 years Control: 4 years	Intervention: <30 years: 34% ≥30 years: 66% Control: <30 years: 17% ≥30 years: 83%	Aboriginal (child): 4% Aboriginal (parent): 2%	NR	Secondary education: 46% Tertiary education: 55%	Sweet drinks intake Food and nutrient intake patterns – sugars and total fats Outcome relating to children's fruit and vegetable consumption

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
	education CD is a self-directed resource for childcare staff and parents, Raising children is a guide to parenting from birth to 5. Control: Wait-list control. Participants received a generic nutrition brochure and the Active Alphabet physical activity resource to simulate real-life exposure to control resources and facilitate retention and blinding of the control group. Tummy Rumbles and Raising Children were provided to the control group at trial completion.							
Farrow 2019 RCT UK	Intervention: Children played with the Vegetable Maths Masters app which consisted of maths games with real images of vegetables (sweetcorn and carrot). Control: Children played with a different maths app called 'Turtle Maths' which did not include images of food, but utilised similar counting and adding maths games.	N=74 children	Intervention: 4.4 years Control: 4.3 years	NR	NR	NR	NR	Outcome relating to children's fruit and vegetable consumption

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
Fildes 2014 RCT UK	Intervention: The intervention pack contained an exposure instruction leaflet, progress charts, and stickers. The exposure instructions asked parents to offer the child a single very small piece of their target vegetable every day for 14 days, allowing the child to choose a sticker as a reward if they tried it. They were asked to do this separately with each child and outside mealtimes. Control: Families received intervention materials on completion of the study.	N=1006 families	Intervention: 3.9 years Control: 3.8 years	Intervention: 38 years Control: 37.3 years	NR	NR	Intervention (maternal education below university level): 49% Control (maternal education below university level): 49%	Outcome relating to children's fruit and vegetable consumption
Haire-Joshu 2008 Cluster RCT USA	Intervention: Families received the standard PAT program plus the 'Hi 5 for Kids' (H5-KIDS) protocol (comprised of three components: a tailored newsletter, a series of home visits, and materials for the parent and child, including storybooks). Control: Parent educators deliver a standardised curriculum via	16 PAT sites N=1659 families	Intervention: 1 to 3 years: 67% 4 to 6 years: 33% Control: 1 to 3 years: 61% 4 to 6 years: 40%	Intervention: <25 years: 28% 25 to 29 years: 35% 30 to 34 years: 21% 35+ years: 17%	Intervention, white: 86% Control, white: 80%	Intervention: <USD 20K: 30% USD 20K to 35K: 30% USD 35K to 50K: 13% USD 50+K: 28% Control: <USD 20K: 25% USD 20K to 35K: 25%	Intervention: Not high school graduate: 16% College graduate: 20% Control: Not high school graduate: 11% College graduate: 25%	Outcome relating to children's fruit and vegetable consumption Changes in attitudes, confidence and knowledge

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
	at least five home visits, on-site group activities and newsletters.			Control: <25 years: 21% 25 to 29 years: 33% 30 to 34 years: 24% 35+ years: 23%		USD 35K to 50K: 18% USD 50+K: 32%		
Heath 2014 RCT UK	Intervention: Parents were asked whether their child liked, disliked or had not tried each vegetable listed in the Vegetable Liking and Familiarity Questionnaire. For each child, two vegetables were randomly selected from those for which the parent's responses matched the initial status set to which the child had been assigned; these became the target (exposed) and control (non-exposed) foods for that child. Parents were sent a picture book about their child's target vegetable- the books consisted of pictures	N=60 parent-child dyads	22 months (range: 20-24 months)	NR	White: 88% of families	NR	Household where at least one parent was educated to graduate level: 78%	Outcome relating to children's fruit and vegetable consumption

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
	and information about the target vegetable. Control: NR							
Hong 2018 Cluster RCT USA	Intervention: Families received a family backpack focused on eating fruits and vegetables. All backpacks included a children's picture book, instructions and supplies for three hands-on activities, a short parent feedback form about the activities, and a brief letter explaining how to use the backpack. Control: Families in the control group received a family backpack focused on handwashing, with no nutrition information included.	6 classrooms, N=49 parent-child dyads	Intervention: 4 years: 54.5% 5 years: 45.5% Control: 4 years: 40% 5 years: 60%	Intervention: 18 to 24 years: 9% 25 to 34 years: 41% 35 to 44 years: 50% Control: 18 to 24 years: 15% 25 to 34 years: 30% 35 to 44 years: 55%	NR	NR	Intervention, bachelor's degree/ Master's/ PhD: 68% Control, bachelor's degree/ Master's/ PhD: 50%	Outcome relating to children's fruit and vegetable consumption
Keller 2012	Intervention: Children in the intervention group were given fruits and vegetables in containers decorated with their favourite cartoon characters. In addition, a sticker was included inside each decorated container to	N=19 children	4 to 5 years	NR	Unclear (participants from diverse ethnic backgrounds)	NR	NR	Outcome relating to children's fruit and vegetable consumption

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
	simulate the practice of premiums used by the food industry; children were allowed to collect these stickers on a game board to cash in for a prize the following week. Control: Participants received fruits and vegetables in plain plastic containers throughout the study. *In both groups, weekly, small-group sessions with the researchers occurred where baseline measures were taken, and family-based nutrition education was delivered.							
Kim 2018 Cluster RCT South Korea	Intervention: The exposure program was administered as one of the ABA curriculum activities. Control: Usual treatment. Training manual provided to control after completion of the study.	5 agencies, N=35 children	Intervention: 4.4 years Control: 4.0 years	NR	NR	NR	NR	Outcome relating to children's fruit and vegetable consumption
Kobel 2019	Intervention: 'Join the Healthy Boat' intervention. A	57 kindergartens, N=973 children	Intervention: 3.6 years	NR	NR	NR	NR	Sugar sweetened beverage

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
Cluster RCT Germany	Kindergarten-based, teacher centred health promotion programme which aims at a healthy lifestyle of kindergarten children and supports among others the prevention of overweight and obese children. Control: No intervention. This group followed regular kindergarten life with no contact during that year.		Control: 3.6 years					Outcome relating to children's fruit and vegetable consumption BMI percentile
Kristiansen 2019 Cluster RCT Norway	Intervention: Multicomponent intervention aimed to improve children's vegetable consumption both at home and in the kindergarten focused on influencing availability, accessibility, encouragement and role modelling. Each kindergarten received a 1-day inspirational course, which included practical training, theoretical session, action plans, materials and resources (both practical and written) for kindergarten and families, and access to a website and closed Facebook group.	73 kindergartens, N=633 children	NR	NR	NR	NR	Intervention (parent with high education: college/university): 67% Control (parent with high education: college/university): 70%	Outcome relating to children's fruit and vegetable consumption

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
	Control: No intervention. This group followed regular kindergarten life; however, they were offered access to the intervention website resources in September 2017.							
Lee 2015 Cluster RCT South Korea	Intervention: Rotating three of the 10 vegetables each week, and vegetables used for program was delivered to Children's home each Monday. Control: No intervention. Normal classroom activities.	N=58 (unclear if this is clusters or participants)	2.62 years (range: 1 to 4 years)	Intervention: 31.20 years Control: 30.95 years	NR	Intervention (Korean Socioeconomic ranking based on annual income, million won: 1: <10, 2: 10-29, 3: 30-49, 4: 50-69, 5: >70): 3.22 Control (Korean Socioeconomic ranking based on annual income, million won: 1: <10, 2: 10-29, 3: 30-49, 4: 50-69, 5: >70): 3.10	NR	Outcome relating to children's fruit and vegetable consumption
Namenek Brouwer 2013 Cluster RCT USA	Intervention: Multicomponent interventions using information provision, behavioural interventions, and interventions aimed at improving access versus healthy foods and drinks	4 childcare centres	<3 years: 27% 3 to 5 years: 73%	NR	NR	NR (All centres had at least some subsidized children enrolled)	NR	Outcomes relating to food and nutrient intake patterns

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
	with status quo/treatment as usual. Control: No intervention.							
Nekitsing 2019 Cluster RCT UK	Intervention: <u>Taste exposure group</u> Mooli was offered during snack time once per week, every week for 10 weeks. <u>Nutritional education group</u> Preschool staff members were trained by the PhunkyFoods team to deliver the existing nutrition education programme, designed for preschool-aged children and provided preschools with ideas and inspiration for classroom carousel play activities (e.g. stories, role play, and games), practical food handling/preparation activities, educational displays for the classroom and parental involvement opportunities. Control: No intervention given during study period. Education program was offered on	11 preschools, N=219 children	Taste exposure group: 38.1 months Nutritional education group: 43.4 months Taste exposure and nutritional education group: 40.5 months Control: 41.8 months	NR	NR	NR	NR	Outcome relating to children's fruit and vegetable consumption

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
	completion of study (after 36 weeks).							
Nicklas 2017 Cluster RCT USA	Intervention: Four DVDs (videos) theatre-based puppet shows that aimed at persuading children to increase vegetable consumption through encouragement, rationale/reason, reinforcement, and role modelling that were delivered over 4 consecutive weeks at preschools. Additionally, "each intervention child took home a bag including the DVD video for that week, a pamphlet, main ingredients to prepare a simple vegetable snack, crayons, and a disposable camera (if parents did not have a smart phone) to use as instructed in the booklets." The intervention was "based on the theoretical framework "transportation into a narrative world", three professionally developed characters, unique storylines and an engaging, repetitious song were incorporated in four 20-min videotaped puppet shows."	6 Head Start centres, N=253 children	Intervention: 4.47 years Control: 4.38 years	NR	Intervention (Hispanic): 46 % (African American): 59% Control (Hispanic): 54 % (African American): 41%	NR	NR	Outcome relating to children's fruit and vegetable consumption

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
	Control: No alternate intervention during intervention period.							
O'Connell 2012 Cluster RCT Crossover USA	Intervention: Children at Preschool A were served one of the new vegetables every day for 30 days in a 3-day cycle (e.g. Monday, cauliflower; Tuesday, snow peas; Wednesday, green pepper) until they had received each vegetable a total of 10 times. Control: Preschool B continued routine practice for the first 6 weeks, and then switched conditions with Preschool A for the second 6 weeks.	2 preschools, N=96 children (recruited) *Note: number of children randomised NR	Range: 3 to 6 years *85% of children were 4 or 5 years old	NR	White: 69% Asian: 8% African American: 5% Hispanic: 6% Other: 12%	NR	Children with at least one parent with a bachelor's degree: 93% Children with at least one parent with a graduate or professional degree: 75%	Outcome relating to children's fruit and vegetable consumption
Owen 2018 RCT UK	Intervention: <u>Visual familiarisation phase</u> Parents of children in the 'fruit book' and 'vegetable book' groups were sent a picture book about their child's target fruit or vegetable, respectively. Each book contained 6 pages of colour photographs and basic information about the food,	N=127 children	Fruit book: 21.8 months Vegetable book: 21.7 months Control: 21.3 months	NR	NR	Fruit book, parent education (% degree): 60% Vegetable book, parent education (% degree): 48%	Fruit book, household income (% GBP 50k + pa): 55% Vegetable book, household income (% GBP 50k + pa): 50%	Outcome relating to children's fruit and vegetable consumption

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
	presented as a 'farm to fork' story showing how the food grows, how it is sold in shops, and what it looks like when it is cut open, prepared and served. Parents were asked to look at the book with their child for 5min every day for 14 consecutive days. Taste-exposure phase Families in all conditions participated in two weeks of taste exposure. Parents were asked to offer their child a taste of both target foods every day for 15 consecutive days. Control: Participants didn't receive a book and were contacted two weeks later to participate in the taste-exposure phase.					Control, parent education (% degree): 59%	Control, household income (% GBP 50k + pa): 42%	
Remington 2012 RCT UK	Intervention: Tangible reward Parents were asked to offer their child a small piece (~2.5g) of their target vegetable every day for 12 weekdays and to tell them that they could choose a	N=173 parent-child dyads	Tangible reward: 3.96 NR) years Social reward: 3.99 years	Tangible reward: 37.44 years Social reward: 37.35 years	White: 66% Black: 2.9% South Asian: 6%	NR	Nongraduate: 24% Degree level of higher: 62%	Outcome relating to children's fruit and vegetable consumption

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
	sticker if they tried it. No tastings were done over the weekends. <u>Social reward</u> Parents were asked to offer the vegetable as described above and to praise their child with phrases such as "brilliant, you're a great vegetable taster" if they tasted it. The parents were to emphasize that the praise was being given for tasting the vegetable. Control: No intervention. Participants were given no information but were told they would be taught a special technique to help their child eat more vegetables after the last visit.		Control: 3.90 years	Control: 37.52 years				
Roset-Salla 2016 Cluster RCT Spain	Intervention: Four educational workshops on alimentation at the beginning of the study and one reminder at 4 months. A model of participatory-active education was used, in order to achieve practical skills in addition to nutritional knowledge. Cognitive (teaching how to	12 day care centres, N=206 children, N=195 parents	Intervention: 1.3 years Control: 1.4 years	Intervention: 35 years Control: 35 years	NR	NR	Educational level, primary: 10% Educational level, secondary: 35% University: 55%	Discontinued breastfeeding Sweet snacks and soft drinks intake Food and nutrients intake pattems – sugars intake Outcomes relating to children's fruit

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
	improve diet), emotional (addressing beliefs and attitudes of the participants through discussion and analysis techniques) and skill areas (developing dietary skills) were included. The aim was to incorporate new and better dietary knowledge and to change the habits of the participants. Control: No education related to nutrition received. Participants were invited to a workshop on a subject unrelated to the study/nutritional education.							and vegetable consumption
Skouteris 2015 RCT Australia	Intervention: MEND (Mind, Exercise, Nutrition…Do it!) 2 to 4 interventions: Each session included three sections: (i) 30 min of guided active play; (ii) 15 min of healthy snack time based on an evidence-based, exposure technique to promote acceptance of fruit and vegetables and (iii) 45 min of supervised creative play activities for the children while parents attended an	N=201 parent-child dyads	Intervention: 2.7 years Control: 2.8 years	Intervention: 35 years Control: 35 years	NR	Intervention, annual family income (AUD): AUD < 450,000: 14% AUD 45,001 to 85,000: 41%, AUD 85,001 to 125,000: 27%, AUD > 125,000: 17% Control, annual family income (AUD):	Intervention, highest level of education bachelor's degree or higher: 57% Control, highest level of education bachelor's degree or higher: 60%	Outcome relating to children's fruit and vegetable consumption

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
	interactive education and skill development session. Control: Wait-list control. No intervention was given but at study completion participants were offered the active intervention programme.					AUD < 450,000: 21% AUD 45,001 to 85,000: 33% AUD 85,001 to 125,000: 27% AUD > 125,000: 19%		
Smith 2017 Cluster RCT USA	Intervention: <u>Access only</u> Received the take home weekly fruits and vegetables, without the educational intervention. <u>Access and education</u> Received weekly take home fruits and vegetables, education for the children, and supplemental materials, such as newsletters and recipes, for the families about the produce being provided. Control: No intervention. Participants didn't receive produce or education during intervention period. Education was provided after the study had finished.	4 Head Start centres, N=240 children	3 year olds: 80 (38.3%) 4 year olds: 116 (55.5%) 5 year olds: 13 (6.2%)	NR	Hispanic: 9 (4.3%) White: 152 (72.7%) Multi-racial: 36 (17.2%) Black: 12 (5.7%)	Low socio-economic (no further details provided)	NR	Outcome relating to children's fruit and vegetable consumption

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
Staiano 2016 RCT USA	Intervention: Food modelling group Copy-Kids Eat Fruits and Vegetables DVD Non-food DVD group Copy-Kids Brush Teeth. Control: No DVD. Food items presented same as intervention, but no DVD played on exposure days.	N=42 children	Food modelling DVD: 4.5 years Non-food DVD: 4.1 years No DVD (Control): 4.3 years	NR	White: 74% African American: 5% Asian: 10% Hispanic: 10%	NR	NR	Outcome relating to children's fruit and vegetable consumption
Tabak 2012 RCT USA	Intervention: Addressed vegetable and food issues based on the baseline surveys, and the dietitian helped parents select 1 primary target area for improvement during the intervention from 4 possible options (vegetable availability; picky eating; modelling; family meals). These areas were selected based on Social Cognitive Theory. Control: Participants received 4 non-health/nutrition related children's books, 1 per month.	N=50 parent-child dyads	Intervention: 3.9 years Control: 3.3 years	Intervention: 36.6 years Control: 36.2 years	Intervention, non-white: 18% Control, non-white: 10%	Intervention, parent income (USD), <50000: 18% ≥50000: 77% Control, parent income (USD), <50000: 81% ≥50000: 19%	Intervention, college or less: 36% Control, college or less: 43%	Outcome relating to children's fruit and vegetable consumption

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
Verbestel 2014 Cluster RCT Belgium	Intervention: The intervention aimed at increasing daily consumption of water (instead of soft drinks), milk, fruit and vegetables, increasing daily physical activity and decreasing daily consumption of sweets and savoury snacks and daily screen-time behaviour. The programme consisted of two components: (i) guidelines and tips presented on a poster (ii) a tailored feedback form for parents about their children's activity- and dietary related behaviours. Control: NR	70 daycare centres, N=203 children	Intervention: 15.8 months Control: 14.9 months	NR	NR	Intervention, Low SES: 13% Control, Low SES: 24%	NR	Sugar sweetened beverage intake Outcome relating to children's fruit and vegetable consumption BMI z-score
Vereecken 2009 Cluster RCT Belgium	Intervention: Multi-component intervention to assist schools to implement a healthy school food policy. The main objectives were to increase the consumption of fruit, vegetables and water and to decrease the consumption of sugared milk drinks and fruit juice.	16 preschools, N=1432 children	NR	NR	NR	NR	Intervention: 49% Control: 49%	Sugar sweetened beverage intake Outcome relating to children's fruit and vegetable consumption

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
	Control: NR							
Wardle 2003 RCT UK	Intervention: <u>Taste exposure</u> Intervention carried out at home. Parents were asked to offer their child a taste of a target vegetable daily for 14 consecutive days. Parents were given suggestions to encourage the child to taste the vegetable. Parents were given a vegetable diary to record their experiences, and children could record their liking for the vegetable after each session using 'face' stickers. <u>Nutrition information</u> Parents were informed about the '5 a day' recommendations and given a leaflet with advice and suggestions for increasing children's fruit and vegetable consumption.	N=156 children	Range: 34 to 82 months Mean: 53 months	36 years	White: 74%	NR	Left full-time education at the age of 21 or over: 68%	Outcome relating to children's fruit and vegetable consumption
Watt 2009, Scheiwe 2010 RCT UK	Intervention: A monthly home visiting programme (from 3 to 12 months) delivered by trained local mothers, providing practical support on infant-feeding practices.	N=312 mothers	10 weeks	30 years	Ethnic minority: 50%	Receiving income support/job seeker's allowance: 33%	NR	Sugar sweetened beverage intake Food and nutrient intake pattern – sugar, fat and iron intake

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
	Control: Usual care. Participants received standard professional care from health visitors and GPs.							Outcome relating to children's fruit and vegetable consumption Dental health Use of cups and bottles Changes in attitudes, confidence and knowledge Length Use of cups and bottles Changes in attitudes, confidence and knowledge
Wyse 2012, Wolfenden 2014 Cluster RCT Australia	Intervention: Received a resource kit (including participant workbook containing information and activities, pad of meal planners, and a cookbook including recipes high in fruit and vegetables) and weekly scripted telephone contacts that provided parents with knowledge and skills to modify the home food environment. Control:	30 preschools, N=394 parent-child dyads	Intervention: 4.3 years Control: 4.3 years	Intervention: 35.7 years Control: 35.7 years	Intervention (Aboriginal and/or Torres Strait Islander, child): 1% (Aboriginal and/or Torres Strait Islander, parent): 1% Control (Aboriginal and/or Torres Strait Islander, child): 5%	Intervention (household income AUD ≥100K): 42% Control (household income AUD ≥100K): 40%	Intervention (university education): 45% Control (university education): 50%	Outcome relating to children's fruit and vegetable consumption Child Dietary Questionnaire (CDQ)

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
	Participants were mailed the Australian Guide to Healthy Eating- a 22-page booklet outlining the dietary guidelines and ways to meet them.				(Aboriginal and/or Torres Strait Islander, parent): 3%			
Zeinstra 2017 Cluster RCT The Netherlands	Intervention: <u>Convivial eating</u> A video film was shown, specifically created for this intervention, lasting 4 minutes. The video featured two Dutch children's TV idols, who are enthusiastic about vegetables, particularly carrots. The film features a catchy song about vegetables. <u>Positive restriction and convivial eating</u> Five sessions of positive restriction where children watched role modelling videos. After this, they received eight convivial eating sessions, where they ate raw carrots whilst watching the role modelling video. Control: Participants ate raw carrots twice without watching the role modelling video.	N=102 children	4.8 years	NR	NR	NR	Higher vocational education and/or university degree: 56% Vocational education: 34% Primary and/or secondary school: 10%	Outcome relating to children's fruit and vegetable consumption

Study	Comparison	Sample size (N)	Child age (mean, SD)	Maternal age (mean, SD), years	Race/Ethnicity (n, %)	Level of socioeconomic deprivation	Maternal Education	Outcomes
Zeinstra 2018 Cluster RCT The Netherlands	Intervention: Vegetables were presented in different preparations to prevent boredom and encourage tasting. Food was given during snack hours of 15:00 to 16:00. A song was developed to make the snack time recognisable and fun for children. Control: Participants kept their regular eating routines.	4 childcare centres	Intervention: 25.6 months Control: 25.0 months	NR	NR	NR	Intervention: Higher vocational education and/or university degree: 95% Vocational education: 5% Primary and/or secondary school: 0% Control: Higher vocational education and/or university degree: 90% Vocational education: 10% Primary and/or secondary school: 0%	Outcome relating to children's fruit and vegetable consumption

ABA: applied behaviour analysis; GPs: general practitioners; NR: not reported; PA: physical activity; PAT: parent as teachers; RCT: randomised controlled trial; SD: standard deviation; SEIFA: Socio-Economic Indexes for Areas; SES: socio-economic status