



Supplementary Table 1: PRISMA 2009 checklist

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis, or both.	Title
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	Abstract
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	Background, Para 3
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	Background, Para 4
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	Methods, Para 1
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	Methods, Para 3
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	Methods, Para 2
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	Supplementary Table 2
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	Methods, Para 4 and Figure 1
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	Methods, Para 5
Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	Methods, Para 3
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	Methods, Para 6
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	Methods, Para 8
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis.	Methods, Para 7,8,9

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Section/topic	#	Checklist item	Reported on page #
Risk of bias across studies	15	Specify any assessment of risk of bias that may affect the cumulative evidence (e.g., publication bias, selective reporting within studies).	Methods, Para 9
Additional analyses	16	Describe methods of additional analyses (e.g., sensitivity or subgroup analyses, meta-regression), if done, indicating which were pre-specified.	Methods, Para 9
RESULTS			
Study selection	17	Give numbers of studies screened, assessed for eligibility, and included in the review, with reasons for exclusions at each stage, ideally with a flow diagram.	Results, Para 1
Study characteristics	18	For each study, present characteristics for which data were extracted (e.g., study size, PICOS, follow-up period) and provide the citations.	Results, Para 3
Risk of bias within studies	19	Present data on risk of bias of each study and, if available, any outcome level assessment (see item 12).	Results, Para 2
Results of individual studies	20	For all outcomes considered (benefits or harms), present, for each study: (a) simple summary data for each intervention group (b) effect estimates and confidence intervals, ideally with a forest plot.	Figure 2 and 3
Synthesis of results	21	Present results of each meta-analysis done, including confidence intervals and measures of consistency.	Results, Para 14, 17, 18
Risk of bias across studies	22	Present results of any assessment of risk of bias across studies (see Item 15).	Results, Para 16
Additional analysis	23	Give results of additional analyses, if done (e.g., sensitivity or subgroup analyses, meta-regression [see Item 16]).	Results, Para 15, 20-23
DISCUSSION			
Summary of evidence	24	Summarize the main findings including the strength of evidence for each main outcome; consider their relevance to key groups (e.g., healthcare providers, users, and policy makers).	Discussion, Para 1
Limitations	25	Discuss limitations at study and outcome level (e.g., risk of bias), and at review-level (e.g., incomplete retrieval of identified research, reporting bias).	Discussion, Para 8
Conclusions	26	Provide a general interpretation of the results in the context of other evidence, and implications for future research.	Conclusions
FUNDING			
Funding	27	Describe sources of funding for the systematic review and other support (e.g., supply of data); role of funders for the systematic review.	Funding statement

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For more information, visit: www.prisma-statement.org.

Supplementary Table 2: Key words and search strategy

	MEDLINE via EBSCO
	<ol style="list-style-type: none"> 1. "prenatal" 2. (MH "Pregnant Women") OR "pregnan**" 3. (MH "Child, Preschool") OR "preschool child**" 4. (MH "Infant+") OR "infant" OR (MH "Infant, Newborn+") 5. 1 OR 2 OR 3 OR 4 6. "early childhood development" 7. (MH "Parenting") OR "parenting" OR (MH "Parent-Child Relations+") 8. "parent-child interaction" 9. "psychosocial stimulation" 10. "stimulation" 11. (MH "Play and Playthings+") OR "play" 12. (MH "Early Intervention (Education)") OR "education intervention" 13. 6 OR 7 OR 8 OR 9 OR 10 OR 11 OR 12 14. "nutrition" 15. "nutrition education" 16. "breastfeeding promotion" 17. "food supplementation" 18. (MH "Feeding Behavior+") OR "responsive feeding" 19. (MH "Micronutrients+") OR (MH "Dietary Supplements+") OR (MH "Food, Fortified") OR "micronutrient supplementation" 20. (MH "Nutrients+") OR "macronutrient supplementation" 21. (MH "Nutritional Physiological Phenomena+") OR "nutritional supplementation" 22. (MH "Food Assistance") OR "nutrition programs" 23. 14 OR 15 OR 16 OR 17 OR 18 OR 19 OR 20 OR 21 OR 22 24. 13 AND 23 25. 5 AND 24 [Limiters - Date of Publication: -20201116; Human]

Supplementary Table 3: Inclusion and exclusion criteria

Characteristics	Inclusion criteria	Exclusion criteria
Population	Children 5 years and under and/or pregnant women Human population	Population other than young children aged above 5 years Children born premature or having serious health illness Animal studies
Intervention	Should include both nutrition and stimulation interventions Stimulation: parent groups, use of structured curriculum, individual parent counselling, responsive care, play, group sessions or home visiting. Nutrition: micronutrient and/or macronutrient or food supplementation, nutrition education, breastfeeding promotion, or responsive feeding.	Studies including nutrition only or stimulation only interventions separately.
Outcomes	Both child development and growth outcomes measures including one or more outcomes in the two categories as follows: Child development outcome measures: cognitive development, motor development and language development. Growth outcome measures: length-for-age/height-for-age, weight-for-age, and weight-for-length/weight-for-height Z scores.	Studies that reported only growth or only child development outcomes rather than both together and any other outcome not relevant to the focused outcome.
Study design	Original quantitative empirical evidence such as randomised controlled trials or non-randomised controlled trials. Any quantitative or qualitative process evaluation articles of the primary trial describing the intervention and possible mechanism of effects linked to the study will be included for this review for complementary of details. This will not be counted as an individual study included.	Observational studies (cohort studies, case-control studies, cross-sectional studies, case-series); reviews, meta-analysis, and overviews; opinion pieces such as commentaries, editorials, letters to the editor; pre-post-evaluation without a comparison group.
The publication date for a top up search	Inception to November 2020	-
Language	Articles published in the English language only	Articles published in any language other than English.

Supplementary Table 4: Studies excluded from the systematic review

S. N	STUDY	YEAR	REASONS FOR EXCLUSION
1	Abessa	2019	It does not have nutrition intervention
2	Aboud	2008	Looks at responsive feeding behaviours
3	Ahun	2018	Observational study
4	Akhter	2011	Conference abstract
5	Akter	2020	Feasibility study
6	Andrew	2018	Children aged 4.5 -5.5 years.
7	Aprilla	2018	Observational study
8	Atukunda	2019	Looking at maternal depression and its association with child development
9	Avan	2014	Observational study
10	Berkes	2019	Observational study
11	Black	2019	Observational study
12	Black	2020	Review
13	Brown	2017	Looking at role of caregiving on height of children
14	Chmielewska	2015	Looking at effect of nutrition intervention on developmental outcomes
15	Cremer	1977	Growth outcomes not reported
16	Ctri	2017	Study protocol
17	De Andraca	1999	Looks at feeding and motor development
18	De boer	2018	Observational study
19	Eshel	2006	Review
20	Fernald	2008	Looking at effect of cash transfer of developmental outcomes
21	Fernald	2016	Study protocol
22	Fernandez-rao	2014	Study protocol
23	Gelli	2017	Study protocol
24	Gelli	2017_2	Conference abstract
25	Gelli	2019	Children aged 36 -72 months.
26	Gladstone	2019	Study does not include stimulation intervention and ECD outcomes are measured only in subsample.
27	Gowani	2014	This is the cost effectiveness study of Pakistan trial.
28	Grantham-McGregor	1980	Lacking a nutrition component
29	Grantham-McGregor	1987	Lacking a nutrition component
30	Grantham-McGregor	1997	Children aged 7-8 years
31	Grantham-McGregor	2014	Review
32	Grantham-McGregor	2016	Review
33	Hamadani	2014	Review
34	Hossain	2019	Study protocol
35	Isrctn	2014	Study protocol

36	Isrctn	2017	Study protocol
37	Isrctn	2017_2	Study protocol
38	Khan	2017	Study protocol
39	Khomsan	2013	Observational study
40	Khorasan	2013	Observational study
41	Kotchabhakdi	1987	Does not meet inclusion criteria
42	Larson	2018	Looking at the effect of nutrition intervention on developmental outcomes
43	Luo	2019	Does not include nutrition intervention and growth outcomes. Includes stimulation and health promotion intervention
44	Martin	2018	Case-study
45	Martinez	2018	Looking at the effect of nutrition intervention on nutrition status
46	Matias	2017	Looking at the effect of nutrition intervention on developmental outcome
47	McGrath	2014	This is a description of capacity building to deliver intervention not the results of intervention on child's outcome.
48	Muhoozi	2018	Looking at the effect of nutrition and hygiene intervention on dental caries and growth
49	Murtha	2020	Feasibility study
50	Nahar	2015	Looking at the effect of intervention on depressive symptoms of mother
51	Nahar	2020	Observational study
52	Nahar	2012_2	Looking at the effect of stimulation intervention on home quality and caregiving practices
53	Nair	2016	Looking at the effect of stimulation intervention on developmental outcomes
54	Nct	2014	Study protocol
55	Nct	2015	Study protocol
56	Nct	2016	Study protocol
57	Padilla	2015	This is a program evaluation
58	Phuka	2018	Feasibility study
59	Pierce	2020	Observational study
60	Pitchik	2017	Conference abstract
61	Powell	1995	Observational study
62	Prado	2016	Observational study
63	Prado	2017	Intervention includes nutrition + infection treatment
64	Puentes-Rojas	1999	Does not meet inclusion criteria
65	Savage	2018	Study protocol
66	Savage	2018_2	Looking at the effect of responsive parenting (feeding practices) on obesity in children
67	Scharf	2018	Observational study
68	Shi	2018	Outcome is caregiving behaviours only
69	Shor	2009	Does not meet inclusion criteria

70	Slctr	2019	Study protocol
71	Sloan	2010	Observational study
72	Sudfeld	2019	Study protocol
73	Super	1990	Does not include developmental outcomes
74	Symington	2018	Study protocol
75	Symonds	2017	Does not meet inclusion criteria (Programme evaluation)
76	Tamura	2003	Does not meet inclusion criteria
77	Taneja	2020	Study protocol
78	Turwine	2018	Includes only nutrition intervention
79	Walker	2005	Observational study
80	Walker	2006	Age group above 5 years
81	Watanabe	2005	Age group above 5 years
82	Zhang	2018	Looking at the effect of nutrition intervention on developmental outcomes
83	Zhou	2018	Conference abstract
84	Zhou	2019	Intervention includes A quasi-experimental design with five components of nurturing care (child health, nutrition, responsive care protection and early learning) as an intervention.

Full reference of the excluded studies:

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Supplementary Table 5: Implementation process of studies with integrated nutrition + stimulation interventions

Source	Context	Implementation strategy / Behaviour change techniques	Combined stimulation and nutrition Intervention content / Theoretical guideline	Intensity / Duration	Personnel	Training / Supervision	Fidelity / Compliance
Mckay 1978 [30]	Colombia, Cali Undernourished children and children from low-class and middle-upper class with normal anthropometry	Center-based visit Information sharing, practice guided activities	The four treatment arms received combined treatment including supplementary feeding and education programme activities. Stimulation: Used integrated curriculum model designed from elements from pilot study and other education programmes. Children visited day care centre to perform educational programmatic activities designed to enhance cognitive development, social abilities, language, fine and gross motor skills. 6-8 guided activities per day, later progressed to time availability for individual projects and included new concepts, stimulate verbal expression, and develop motor skills, to promote experimentation and decision taking by children. Nutrition: Nutrition education to reinforce recommended food consumption practices. Supplementation of commercially available low-cost foods and a high protein supplement. The nutritional supplementation provided minimum 75% of recommended daily protein and calorie allowances and >100% of recommended dietary allowances for vitamin A, thiamine, riboflavin, niacin, and iron. Children were given three meals per day for five days /week over the nine months period and all ate in small groups.	Six hours a day for five days per week for nine months Four hours dedicated to education two hrs for health, nutrition, and hygiene Nine months of each treatment period	Trained preschool teachers and Childcare workers	-	>95% attendance in all groups
Waber 1981 [44]	Bogota, Colombia,	Home visits	Stimulation: Use adapted Infant Education Curriculum of high scope foundation, trained home visitors educated mothers about the	-	-	-	-

	economically low southern barrios of Bogota	Information sharing	developmental processes of their children to become responsive towards their needs and actions, initiated activities, encouraged mothers to continue play and interact with their child and make them responsible for interaction with their children. Nutrition: Food distribution of enriched bread, dry skimmed milk, and vegetable oil for the entire family and 623 k cal and 20 g of protein to those with children over 12 months age, 38.4 g of protein/d and vitamin-mineral tablets for pregnant and lactating mothers, whole dry milk for children weaned before six months, Whole dry milk, high protein vegetable mixture and ferrous sulphate after six months age, and additional iron and vitamin A supplemented to children 12 months age.				
Grantham-McGregor 1991 [45] Walker 1991 [22]	Jamaica, poor areas of Kingston	Home visits Information sharing, demonstration, and practice play activities, used toys and picture books	Stimulation: Used structured Jamaican curriculum. Mothers were taught to play with their children to promote their development. Home-made toys and picture books were borrowed, and mothers were encouraged to play with their children. Nutrition: One kg milk-based formula, sufficient for child to receive 3135 MJ and 20 g of protein daily for 12 months. Large amount was given to compensate sharing of food.	One hour per week over 12 months	Community Health Aides	10% of home visits were observed by Supervisors	-
Powell 2004 [31]	Jamaica, Urban areas of Kingston and St Andrew	Home visits Demonstration and practice play activities, problem solving, used toys and books	Integrated with existing services. Stimulation: used adapted structured curriculum based on the Jamaican model. Demonstration of play activities with participation of mother and child using low-cost home-made toys and books materials. Toys were borrowed and exchanged on every visit. Issues on parenting were discussed.	Weekly for 30 mins over 12 months	Community Health Aides	Basic training in maternal and child health for 6-8 weeks and two additional workshops for a week for child development and psychosocial stimulation intervention.	Group sessions were initially planned in the clinics but did not work in the setting, Weekly home visits were not achieved and were conducted

			Nutrition: Standard health and nutrition services for mothers and monitored child's growth.			Monthly observation of home visit by the supervisor and a fortnightly discussion and review of the records in the clinic visits.	in very 10-11 days, median number of home visits 32.5. (50 expected)
Gardner 2004 [32]	Jamaica, Kingston, St Andrew, and St Catherine	Home visits Demonstration of play activities with toys	Stimulation: Used structured Jamaican curriculum. Based on Curriculum was based on Piagetian concepts for children <24 months and concepts of shape, size, position, and color for >24 months aged children. Showed mothers to play with their child, encouraged play and maternal-child interaction. Lent toys and exchange at each visit. Nutrition: 10 mg elemental zinc sulphate in a flavored syrup. Seven vials were delivered at home during weekly visits for six months All children received micronutrients containing iron and vitamins and caregivers were instructed to give 0.5mL daily for six months	Home visits: weekly for 30 mins over 12 months Zinc: weekly home visit-one vials for each day over six months.	Community Health Workers	-	62% children received 3-4 visits per month, others received 1-2 visits per months 4% on average did not complete seven vials of Zinc each week
Hamadani 2006 [33]	Bangladesh, poor rural areas of Monohardi subdistrict.	Group sessions and home visits Information sharing, demonstrate developmentally appropriate activities, provided low-cost picture book and toys	Integrated stimulation component to existing nutrition programme, which included providing food packets to severely undernourished children at Community Nutrition Centres. Stimulation: Adapted and used curriculum based on Jamaica. Group sessions with mothers included topics on child development and importance of play. Importance of praising, giving positive feedback, chatting with children, labelling things was emphasized, and punishments were discouraged. Home visit included demonstration of play activities to the mother using low-cost toys made. Lent toys and exchange with new toys on every next meeting.	Group session: Weekly at Community Nutrition Clinic (CNC) for 10 months followed by meeting every two weeks for two months Home visit: Twice weekly individual	Play leaders, literate women from village	Trained for two weeks Supervisors attended the visits regularly.	43-83 of 86 expected home visits completed in a year 28 to 29 Group session delivered in each CNC 60% mothers attended >=20 meetings Children received food packets for >70 days.

				visit for eight months followed by weekly home visit for four months		
Nahar 2009 [34]	Bangladesh, Nutritional Rehabilitation Unit (NRU) in ICDDR, B Dhaka Hospital	Group sessions and home visits Information sharing, demonstrate developmentally appropriate activities, provided toys	Integrated stimulation component into the existing routine nutrition care and education given in hospital. Stimulation: Demonstrations of play using activities and homemade toys. Mother were encouraged to play with their children using home-made toys and were provided feedback and to continue the play activities between sessions. During home visit toys were left at home and exchanged on each visit. Nutrition: On discharge mother and child visited NRU for follow-up and received growth monitoring and daily micronutrient supplementation for six months	Group sessions + individual session: daily half-hour of each session, seven visits over six months (twice in first month and then monthly for six months.) Home visit: two in the first month, three in each of the following two months and one in each of the last three months. 18 play session at home or outpatient clinics.	Play leaders, Female health workers in the NRU, Eight years of schooling	Trained for two weeks -

Lozoff 2010 [35]	Chile, Santiago	Home visits Information sharing, demonstration and practice play activities, Problem solving and feedback, provided written materials on child development	Stimulation Mother and infant relationship intervention. Phase 1 (14% of visits): mother and child needs were assessed and analysed and agreed on goals with mother. Phase 2: (70% of visits): demonstration of enjoyable activities with infants, coaching, problem solving, information about child development and provide support Phase 3: (16% of visits): encourage mothers to continue activities with their child and problem solving. Nutrition: Daily oral iron supplementation. Six months infants were treated with oral supplementation of 15 mg elemental iron as ferrous sulphate for 12 months, 12 months old were treated with 30 mg of elemental iron as ferrous sulphate for six months.	Weekly home visits for one hour over 12 months Each home visitor visited six families per week	Professional educators Supervisor: Psychologists	Three manuals for diagnostic phase and first and second year of the intervention were developed for training. Professional educators were trained by project psychologists. They were supervised weekly in group and individual.
Aboud 2011 [36]	Bangladesh, Khansama subdistrict Poor and very poor population	Group sessions Information sharing, demonstration and practice play, problem solving and feedback, provided careful instructions	All groups received regular program including information on health, nutrition, and child development. Stimulation: Use a manual of 30 pages. Mothers discussed and practiced 6 messages with their children: handwashing, self-feeding, maternal verbal responsivity, solutions to child refusals, dietary diversity, and responsive stimulation. Peer educator would demonstrate the behaviour with a child followed by coaching mothers to practice with their children. Discussed problems and provided feedback. Nutrition: A sachet of Sprinkles (iron, vitamin A, folic acid, vitamin C, zinc) provided to the child by peer educator during parent group session and mothers were instructed to add one sachet to a meal daily for six months.	Weekly, six sessions on responsive parenting for five weeks plus a booster session Weekly delivery of the Sprinkles sachet to mothers for six months	Peer educators, young women from village Had at least grade nine level education	Four days training Supervisor observed group sessions >85% attendance for 6 additional stimulation sessions 80% of mothers used sprinkles

Ogunlade 2011 [37]	South Africa, Northwest province, low socio-economic community	At pre-school	Stimulation: preschool education Nutrition: stiff maize- meal porridge with added micronutrient powder (~8 g) containing amylase-rich light malted barley flour	Stimulation: 52 school days Nutrition supplement: five days per week for 11 weeks (52 feeding days)	18 front line study assistants (two assistants per school).	Three days training programme using a training manual. Included demonstration on how to administer point-of-use fortification. Training focused on hygiene, best practice, preparation of maize-meal porridge standard recipe and cooking and demonstrations.	Compliance with the feeding in intervention group was 79% and in control was 83%
Nahar 2012 [19]	Bangladesh, Slums of Dhaka,	Clinic visits Information sharing, demonstration of play activities used materials toys and picture books	Stimulation: Used a semi-structured curriculum, based on Jamaica model, previously used in the similar settings. Individual play sessions with mother and child using toys. Toys and picture books were lent and exchanged one very visit. Mothers were encouraged to play with the child in between the visits. Parenting sessions discussed matters of child development, importance of interaction with child and demonstration of play activities. Nutrition: Supplementation of food packets ('Pushti Packet') including rice powder, lentil powder, molasses, and soya oil at the time of discharge from the hospital and then at each clinic visit. Provided instruction on preparation of food packets, One packet comprising 150 kcal for children <12 months age and two packets comprising 300 kcal for children >12 months age. Supplied food packets for siblings under age five.	Stimulation: Fortnightly visits for six months Nutrition supplement: fortnightly for three months	Play leaders, trained female health workers, with 8-10 years education, low paid health workers	-	Median contacts 9 of 12 expected when intensity increased High attrition
Vazir 2013 [38]	India, rural Andhra Pradesh, Nalgonda District	Home visits Information sharing and provide instruction	All groups received standard governmental programme integrated child development services (ICDS) including center-based supplemental food, home-visit counselling on	Fortnightly visit for children aged 4-6 months (6 visits) and	Trained village women (mothers) High school educated	VWs were provided training to counsel mothers/caregivers using the flipchart. Village Women (VW)	-

		on engaging and playing with children, demonstrations, used toys, flipcharts, and visual materials	breastfeeding and complementary feeding, growth monitoring and pre-school education. Stimulation: Provide appropriate messages and skills including demonstrations on responsive feeding following Pan American Health Organization (PAHO)/ World Health Organization (WHO) guidelines, lent simple toys to the children 5 times, and demonstrated mothers use of play toys to play and interact with their children, toys were exchanged on every visit. Included 8 responsive feeding messages and 8 developmental messages Nutrition: 11 nutrition education messages on breastfeeding and complementary feeding. age-appropriate messages and materials were provided using PAHO/WHO guideline.	from 10 to 14 months (12 visits), Weekly visit for children aged seven (12 visits) 30 planned visits over 12 months	Supervisor: Graduates in nutrition	in intervention team (60) were trained to conduct a focused conversation with mothers on various topics on stimulation and nutrition Supervisors examined records of home visits, independent monitoring visits by asking mothers about the messages provided by VW and period reinforcement training. VWs in nutrition and combined intervention groups were trained separately using flipcharts.	
Aboud 2013 [39]	Bangladesh, rural and peri-urban areas in Meherpur subdistrict,	Group sessions and home visits Information sharing, instructions on practice, demonstrations, problem solving, sharing illustrative cards	Used a manual and a child development card. Manual informed by the responsive parenting conceptual framework and the HOME inventory. Stimulation + Nutrition: Information sharing on nutrition and stimulation including showing love, avoiding harsh discipline, responsive self-feeding and providing diverse diet, talking, and singing with child, providing play toys and play mates an provide instruction on practices. Demonstration of communication and play and practicing by mother and children. Nutrition counselling sessions included problem solving. Based on guidelines for complementary feeding and psychosocial development of young children, social learning theories of behaviour	14 group sessions fortnightly for four months and monthly for six months Counselling for 10 minutes to mothers at home and community clinics	Community facilitator, young women with 10 th grade education recommended by community leaders, conducted group sessions, received no stipend Government paid Family Welfare Assistant with 12 th grade	Community facilitator were provided four days of training spread out over four months followed by three one-day refresher trainings every two months. Training focused on understanding of parenting practices, demonstration of activities, and communications skills to lead the group sessions Trained and supervised by the	Fidelity checklist was used to monitor the program. Fidelity was poor in the beginning, reached 62% by the 5 th month and increased thereafter. Attendance was high 85% in group sessions, mothers reported receiving average two home visits and heard the

			change, evidence from previous parenting programs and baseline findings showing poor dietary diversity, stimulation, hygiene, and sanitation.		education and work experiences in villages, counselling mothers at their homes, received monthly salary and per diem of \$100	organization. Supervisors observed and provided feedback after the group session and during trainings/refreshers. Family Welfare Assistants (FWA) were trained on child development in a two-day course and during a mid-program refresher day. Training focused on how and why parents were to practice the messages. Supervisors observed and gave feedback on 10-15 household visit of each FWA in the first four months, contact was reduced after this.	messages in the community clinics.
Tofail 2013 [46]	Bangladesh, poor rural area in Monohordi subdistrict, Children with mild to moderate IDA (hb >80 & <110g/L, TFR >=5mg/L)	Home visits Demonstration, provide materials such as toys and picture books	Stimulation: Used semi-structured curriculum based on Jamaican study manual modified to be culturally appropriate. Demonstrate mothers how to play and interact with their children, encourage mother-child interaction, lent toys and picture books made from local resources, exchange them on each visit. Nutrition: One bottle of 35 ml ferrous sulphate syrup supplement to children with iron deficient, parents were advised to give 5mL (30 mg) syrup daily to their child.	Home visits weekly for nine mo. M=36 (32-39) home visits in intervention group Iron syrup: supplied weekly to homes for the first six months	15 PLs, local women from the village who had completed 9 to 12 years of education	Three weeks of training in home visiting techniques and the curriculum Three supervisors mentoring Play Leaders (PL) provided monthly observation of each PL activities and monthly meetings with all PLs	Compliance with home visit was 99% in both iron deficiency and non-iron deficiency groups At end of each week amount of iron syrup remaining in the bottle was measured to determine the

							amount taken by the child.
Yousafzai 2014 [40]	Pakistan, rural areas in Naushero Feroze district of Sindh	Group sessions and home visits	Intervention was integrated into the existing services. All groups received the standard health-care services provided by the Lady Health Worker (LHW) programme.	Routine monthly group sessions and home visits for 33 mo.	LHWs: 20 government supported, locally residing women of age 18-45 years with minimum 8 th grade education.	Responsive Stimulation (RS): LHWs received 3 days of basic training	Supervisory checklist used to monitor fidelity, the fidelity to intervention was good.
Yousafzai 2016 [23]		Information sharing, coaching, demonstration, and feedback using play and communication activity guide, provide picture book and home-made toys, problem solving, peer learning and support	Stimulation: Used curriculum adapted from the UNICEF and the WHO, Care for Child Development. Observed caregiver perform play activity with their child, provide coaching and feedback on age-appropriate play and communication activities using resource kit with examples of homemade and readily available toys between caregivers and the child at home and in group sessions to enhance parent-child interaction.	Each group meeting lasted for 1 hour 20 mins on average.	Supervisors: Six Early Childhood Development (ECD) facilitators, women living locally, with at least a bachelor's degree and previous work experience	Enhanced Nutrition (EN): LHWs received basic training of two days	Group meetings occurred as expected: one meeting per month
Yousafzai 2018 [26]			Nutrition: Nutrition education using the strengthened basic nutrition education curriculum of LHWs programme through addition of responsive feeding messages, counselling and problem solving about feeding. Responsive feeding messages included recognising and responding to early cues of hunger, communication, encouragement, and patience during feeding and independent feeding, Multiple micronutrient powder (Sprinkle, Genera Pharmaceuticals, Pakistan) containing iron, folic acid, vitamin A and vitamin C were distributed at home.	Home visits lasted for 30 min in Responsive Stimulation (RS), 11 min in Enhanced Nutrition (EN), seven min in control	Ratio of ECD facilitator: LHWs was 1:10	RS+EN: LHWs received five days of basic training Control: No additional trainings were provided Refresher training: One day every six months and support the training by on the job coaching every month. 16 LHW stopped working for a prolonged time, four LHWs left their post in RS+EN group.	31% of all female caregivers participated in each meeting, 75% households received monthly home visits 62% in RS, 55% in RS+EN received advice on care for child development during home visits 75% in RS, 75% in EN, 77% in RS+EN, 12% in Control group received advice on nutrition during home visits.
				Monthly supply of Sprinkle and was repeated next month, if consumed for up to 33 months.		ECD facilitator received three months of centre and field-based trainings. Supervision of LHWs activities at least two times per month, strategies included on job coaching, and feedback guided by supervisory checklist,	

						motivation, and mentorship	60% of mothers reported receiving multiple micronutrient powder
						Follow up at four years: refresher training sessions every three months, daily debriefing, video reviews, monthly field observations by supervisors	
Attanasio 2014 [47]	Colombia, Small towns with population ranged from 2000 to 42000 inhabitant, shared similar culture and customs, beneficiaries receiving cash payments	Home visit Demonstration and practice of play activities provided toy kits, pictorial representation of using supplementation, provided a monitoring booklet with instructions on use and storage and daily intake record forms.	Intervention was integrated with the National Welfare Programme providing cash to the beneficiaries. Stimulation: Based on Jamaican home visit model, used curriculum and materials adapted to socio-cultural context. Intervention included play sessions to demonstrated play activities, encourage mother and child to perform activities, child alone practice the activities and encourage mothers to provide positive reinforcement to support child's learning. Lent toys and picture books and changed weekly. Used toy kits with picture books, naming plates, conversation scenes, puzzles, lotteries and blocks, instruction cards. Nutrition: Micronutrient supplementation consisting of Sprinkles (Hexagon Nutrition, Mumbai, India)- encapsulated micronutrient in powder form, each single-dose sachet containing 12.5 mg iron, 5 mg zinc, vitamin A 300ug retinol equivalents, 160 ug folic acid, 30 mg vitamin C to be used once per day.	Weekly, each lasting for 1 hour for 18 months Sachets with Sprinkles were delivered to each house fortnightly for 18 months	Home visitors: 63% selected among Mother leaders and 37% someone recommended by her, recruited part time, three home visitors per community, were paid \$100,000 and \$25,000 Colombian pesos for RS and nutrition activities respectively. Six mentors, undergraduate degree in psychology or social work or field work experience	Home visitors were trained for two weeks with an additional week of in-service training, one to two months after the program began. Additional five hours training on nutritional component of the intervention following an instruction manual was provided. Mentors received pre-service training for six weeks on the home visiting curriculum and protocols, training and supervision skills and conducting home visits and supervision practice. One mentor supervised and trained 24 home visitors, distributed one-page bulletins	Home visitors filled form on basic visit information, track play activities and materials introduced, collection of empty sachets and monitoring forms from household's fortnightly Mentors monitored fidelity of implementation via one community visit per 7-10 weeks, mentors checked the tracking charts and reminded mother about protocol, response to side effect if arose

					A local field coordinator: overseeing intervention activities and monitoring the mentors	with reminders of best practices on every 7 to 10 week's visit and short text messages on monthly basis.	and address any queries. High compliance: an average of 63 home visit, 83% of those scheduled, an average of 396 Sprinkles, 73% of those scheduled was recorded as having been given by the mothers.
Singla 2015 [41]	Uganda, rural area of northern district, Lira	Group sessions and home visits Information sharing, encouraging parents to learn and enact new practices, discuss, and demonstrate food quantities, problem solving, peer support, provided activity booklet	Stimulation + Nutrition: Used adapted intervention measures, translated into local language Luo. Focused on five messages on childcare including play, talk (two-way interaction between parent-child), diet (a diverse diet with appropriate quantities and frequencies), hygiene (handwashing practice), love and respect and maternal wellbeing. Parents were encouraged to learn and enact new practices with child, spouse and peers and were given homework to practice between sessions. Home visit to review messages, discuss their enactment, resolve barriers, and make observations. Based on Bandura's social-cognitive learning theory.	12 group sessions (six sessions on childcare and four sessions on maternal care and a booster session), each lasted for 60-90 mins, fortnightly for seven months 1 or 2 Home visits between group sessions in the latter half of the programme, each lasting for	13 Community volunteers (seven men and six women): selected by community and Plan Uganda staff members. Average age was 36 years and had completed eight grade education level.	Community volunteer received 14 days training at the beginning and middle of the intervention. They were trained by four plan Uganda staff and two authors. Training focused on programme content and group communication skills, delivered in Luo language. Supervised by four Plan Uganda staff including regular discussion between supervisors and one author. They assist community volunteer to prepare for session, discussed problems, provide feedback. Supervised	75% of mothers attended eight sessions or more

				40-50 mins		six sessions and all supervisors attended first three sessions of the programme. They used structured monitoring form to evaluate the session regulated by community volunteers.	
Rockers 2016 [27]	Zambia, rural area of Southern Province, Choma and Pemba districts	Group meetings and home visits	Stimulation + Nutrition: Used adapted curriculum from CCD package and essential package from care International. Caregivers were taught a diverse curriculum with content on parenting skills, cognitive stimulation and language development activities and forms of play practices, child nutrition and cooking demonstrations and practices and self-care for good mental health and encouraged mother-child interactions.	Completed 23 sessions of home visits and 20 sessions of group meetings, held fortnightly for 12 months	10 Community Development Agents (CDAs), females from local communities were hired for full time, selected from pool of candidates who had worked with the study team before. CDA had prior experience of providing community-based health services, completed at least 9 th grade education with ability to read and write English and Tonga. Each CDA was responsible to visit 25	CDA: Received five days training and refresher on diagnosing illness and supporting child development, home visit protocols, facilitate and support group sessions. Local head mother: Regular meeting with CDA prior to each meeting to receive training and resources following a planned curriculum. Follow up: CDA were trained on the curriculum, three meeting rounds at a time every six weeks. CDA trained and provided resources to the Local Head Mother prior each meeting.	One-quarter of households were visited in every round, 68% of households were visited minimum 20 times, 89% caregivers attended 10 or more meetings, average overall attendance at meeting was around 10. Follow up: Average six caregivers attended each meeting, Parent group meeting 2 to 3 (22%) or 4 or more (35%) times per month. One third of caregivers in the intervention group did not
Rockers 2018 [24]		Sharing information, Discussion, enact activities such as book making, cooking demonstration, provide food items for cooking session, Follow-up: Group meetings Discussions, demonstration, enact activities		Follow-up: 27 sessions of group meetings held fortnightly			

					households and facilitate group meetings.		attend the meeting
					Local head mother selected by the community run group sessions.		
Helmizar 2017 [42]	Indonesia, Tanah Datar district of West Sumatra Province	Group sessions in Childcare centre Information sharing, mother or caregivers to play with their child in the during session and practice of play activities at home, provide toys and picture books, provided two handbooks comprising play and traditional songs and instruction to prepare and administer FS.	Stimulation: A handbook of psychosocial stimulation developed by a psychologist and an anthropologist was used. It was written in local language Manjujai and included play session standardised to developmental measures of children ages 6 to 24 mo. Play sessions and parenting in the Centre of early Child Education or in the Centre of Integrated services. Sessions class included allowing mother or caregivers to play with their child, encouraging mother-child interaction and teach mothers or caregivers about responsive stimulation, encouraging daily practice of play activities at home. Nutrition: Supplementation of formula food containing red sweet potatoes, purple sweet potatoes, red rice, red bean, green bean, soybean, and dried fish, mixed with cooking oil, a little sugar and salt. Packets of food formula were adjusted for children's age groups (6-8 months, 9-11 months and >12 months) with 200 to 250 kcal of energy and 6 to 8 g of protein per day for 6 months.	24 play sessions, weekly basis for one hour for 6 months Monthly parenting education sessions.	Community Health Workers (CHW) Field assistant	Two days training on study procedures and play sessions using a semi-structured curriculum. Trained by expert in parenting and child development.	-
Muhoozi 2017 [43] Atukunda 2019 [25]	South-western Uganda, rural Kabale and Kisoro districts	Group meetings and home visits Information sharing formulate recipes and cooking	Participants received intervention with routine health care. Stimulation + Nutrition: Stimulation intervention was based on social-cognitive learning theory and nutrition	Three main education sessions of 6-8 hrs delivered to each group,	The education teams, two male and two females completed bachelor	VHT attended all three education sessions and were instructed by first author on how to administer the group meetings.	A follow-up assessment form was used to ensure compliance with the intervention.

		demonstration, prompt practice on cooking, review and discuss the knowledge, demonstrate making play materials and stimulation activities, counselling and problem solving, used play toys and locally available foods	intervention was based on 10 guidelines of complementary feeding of breastfed children. Intervention included providing theoretical knowledge on child nutrition and stimulation for 30-40 mins, cooking demonstrations 3-4 hrs, demonstrate making play materials and stimulation activities, encourage mother-child interaction, encourage engagement in play and use of play toys, counselling individual mothers for 30 minutes.	for six months follow up group meeting was held monthly, 26 groups of 4-12 mothers in each group. Home visit was held once in the period between the three main sessions	graduates in nutrition. Village Health Team (VHT) leaders, all female with ability to read and write were chosen by the group. VHT organised monthly group sessions and conduct follow-up meetings at home to assist and encourage adherence to the intervention. They were given an allowance to facilitate these activities.	Quality of the main session were monitored by first and second authors. First author attended all session to monitor quality of the intervention.	84% of mothers attended three sessions during the intervention period.
Schneider 2018 [48]	Indonesia, Jakarta	Individual session in community centre Using iPad application, using book of ASQ learning and play activities at home	Stimulation: iPad-based games child performed five different stimulation tasks such as reading, counting, naming items, puzzles and moving objects detection with the assistance of the parent/caregiver and were provided standardised learning activities to perform by parent/caregiver and child at home. Encouraged parent-child interaction. Nutrition: supplementation of fortified milk powder at home for children. 1 serving = 36 g of powder was diluted in 180 ml of warm water. Fortification consisted of polyunsaturated fatty acids, vitamins, and minerals.	Stimulation: 10-15 minutes for 3-5 days per week for six months, average duration of stimulation task- 32 min per week Nutrition: Two servings per day for six months	A trained psychologist assisted in performance of the task	-	Compliance with the study protocol based on parental reports was high. 91.7% participants consumed the nutritional supplement and 93.7% participants used iPad games.

Hamadani 2019 [28]	Bangladesh, rural three subdistricts in Narsingdi district	<p>Play sessions at community clinics</p> <p>Sharing of nutrition messages, demonstration, discussion, encouragement to perform activities, feedback during session, used locally made toys, media included local song, picture book, provided nutrition cards</p>	<p>Intervention was integrated into the existing primary health care clinics.</p> <p>Stimulation + Nutrition Based on the Jamaican Reach up programme. A manual with curriculum including sessions for children arranged in developmental order from age 6 to 42 months was used. Sessions included a) revision of previous session, b) singing local songs, c) toys with practical demonstration of play/activities (1-2 toys per sessions), d) picture book activities, e) language learning during day-to-day work, f) nutritional messages and pictorial recipe cards for low-cost nutritious diet preparation, g) feedback and review of the activities to be done at home. Lent books and toys and were exchanged in each session.</p>	25 sessions, 40 to 60 mins play sessions with two mother-child dyads at a time at community clinic, fortnightly for 12 months	<p>130 health workers including Community health care provider and health assistant (M: F ratio 1:1) and FWA (all females). Community health care provider and health assistant had completed a bachelor's or master's degree and FWA had completed higher secondary education.</p> <p>Supervisors having a master's degree in psychology or another related subject.</p>	<p>Health workers were trained by research team in groups of 12-15 people for 10 days each.</p> <p>Supervisors were trained to mentor the health workers for 20 days. Each supervisor monitored four clinics, with 1 to 3 health workers per clinic. They mentored health worker twice a month and observed a play session using a checklist. Health worker with poor performance was visited more frequently. Supervisors provided feedback to the health workers at the end of each session and ran a half-day refresher workshop every three months.</p>	859 children and mothers attended a mean 19 sessions and 374 (46%) attended all sessions.
Galasso 2019 [20]	Madagascar, Five regions with highest poverty rates: Amoron'i Mania, Androy, Atsimo Atsinanana, Haute Matsiatra,	<p>Home visits:</p> <p>Sharing information, Counselling and problem solving</p>	<p>Intervention was integrated into the existing nutrition programme including growth monitoring activities for infants and young children, cooking demonstrations, community mobilization and nutrition and hygiene education.</p> <p>Stimulation: Used structured curriculum adapted from the Jamaican Reach up and Learn early</p>	Stimulation: bi-weekly home visit in addition to the nutrition counselling home visits	Additional CHW hired to carry out the home visits, had at least lower secondary education, living within the site.	CHW received 10 days basic training and refresher training on listening and communication skills, problem solving for exclusive breast feeding, introduction to complementary	<p>LNS distribution logs were used to monitor the fidelity of implementation of the LNS delivery.</p> <p>Empty sachets were to be</p>

	and Vatovavy-Fitovinany		<p>Childhood Parenting Programme. Stimulation messages were provided to the parents in home.</p> <p>Nutrition: 20 g of LNS (Lipid-based nutrient supplementation) provided to children aged 6 to 18 months, 40 g of LNS provided to pregnant women within the first 6 months postpartum. Mothers were instructed to mix 10g sachets of supplement in their child typical food two times a day for 24 months. Nutrition counselling included problem solving for breastfeeding, introduction of complementary food and food security.</p>	<p>Nutrition: One visit during pregnancy, monthly visit during the first eight months, bimonthly visits from nine to 12 months and quarterly visits from 12 to 24 months</p> <p>The programme was delivered over 24 months.</p>	Local Non-Governmental Organization (NGO) supervisor	<p>feeding and food security.</p> <p>CHW providing early stimulation received theoretical and practical training on early stimulation at the beginning and at six months intervals. Early childhood development coaches provided on-site support for a week at the programme beginning and after six months of the implementation.</p> <p>Compliance was monitored by NGO supervisors</p>	<p>returned to the CHW to avoid reselling.</p> <p>Home visits occurred as expected: 70-75% at 1st year follow up, 63-70% at study end received nutrition counselling.</p> <p>83% in 1st year follow up and 77% at study end of caregivers in combined counselling group received any home visit.</p> <p>1st years follow up 95% of the target children had received LNS, 80% of pregnant and lactating women has received LNS</p>
Grantham-McGregor 2020 [29]	India, Three districts: Cuttack, Salepur and Bolangir	<p>Group meetings and home visits</p> <p>Information sharing, demonstrate the play and developmental activities to mother and encourage</p>	<p>Health and Nutrition Service link services: The district co-ordinator visited the village on alternate days to mobilise child caregivers and village officials to help them understand the availability and importance the public services: growth monitoring and food supplementation.</p> <p>Stimulation: Used structured curriculum adapted from Reach-Up and Learn curriculum. Mothers were demonstrated to play and perform</p>	<p>Weekly for 24 months.</p> <p>Home visits lasted ~60 minutes.</p> <p>Group session</p>	141 Local female facilitators, Average age 25 years old, education included studying in secondary school to	<p>Female facilitators received training for three weeks, followed by three refresher trainings spread over the duration of intervention, training and weekly supervision by the Mentors</p>	<p>Attendance in group session was lower (51%) than home visit (75%).</p> <p>Compared to the home visiting, refusal to enrol, dropout or poor</p>

<p>them to play with their child, peer-support to isolated mothers in group sessions, provided locally available, low-cost toys and purpose-designed books, used information booklets and visual engagement formats such as story cards, recipe assessment cards, recipe audio recordings, games, and activity cards</p>	<p>development activities (included stacking blocks, doing puzzles, and looking at picture books together) with their children and were encouraged to practice the activities using play materials. Focused on enhancing mother-child interaction and supporting mothers to promote their children's development.</p> <p>Nutrition: The Knowing and Engaging for Young child food and feeding curriculum was used. Visual engagement formats used to educate mothers to enable them to assess and act about their children's nutrition status such as produce positive changes in food choice, preparation and storage, and child health care practice.</p>	<p>lasted ~ 90 minutes.</p> <p>Nutrition education visit lasted ~ 40 minutes.</p>	<p>bachelor completed</p> <p>28 Mentors, had degrees in social sciences, have experience of working with children</p> <p>Three Super-Mentors, had degrees in social sciences, have previous experience of working in similar project</p>	<p>Mentors were trained for 67 days over the duration of the intervention, monthly training, and supervision by Super-mentors</p> <p>Super-mentors retrained for 28 days about group curriculum and running the group sessions.</p>	<p>attendance was high in group sessions.</p>
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Abbreviations: CNC Community Nutrition Clinic, PAHO Pan American Health Organization, WHO World Health Organization, VW Village Women, ICDS Integrated Child Development Services program, FWA Family Welfare Assistants, PL Play Leaders, LHW Lady Health Worker, UNICEF United Nations Child's Fund, CCD Care for Child Development, ECD Early Childhood Development, RS Responsive Stimulation, EN Enriched Nutrition, CDA Child Development Agents, CHW Child Health Worker, VHT Village Health Team, NGO Non-Governmental Organization, LNS Lipid-based nutrient supplementation

Supplementary Table 6a: Pooled estimates of integrated interventions versus usual care by intervention characteristics for developmental outcomes

Subgroup	N	Cognitive score ES (95% CI)	P value ^a	N	Motor score ES (95% CI)	P value ^a	N	Language score ES (95% CI)	P value ^a
All studies	17	0.53 (0.30 to 0.75)		14	0.29 (0.08 to 0.51)		13	0.42 (0.16 to 0.68)	
Delivery mode									
Individual visits	9	0.40 (0.21 to 0.59)	Ref	8	0.13 (-0.003 to 0.27)	Ref	5	0.20 (0.03 to 0.37)	Ref
Individual visits and group sessions	5	0.44 (0.24 to 0.64)	0.994	3	0.35 (0.09 to 0.61)	0.445	4	0.48 (0.69 to 0.88)	0.507
Group sessions	3	0.92 (-0.14 to 1.99)	0.123	3	0.56 (-0.26 to 1.38)	0.118	4	0.55 (-0.16 to 1.26)	0.361
Number of Behaviour Change Techniques									
<3	5	0.27 (0.03 to 0.50)	Ref	4	0.08 (-0.11 to 0.27)	Ref	2	0.06 (-0.04 to 0.16)	Ref
≥3	12	0.62 (0.35 to 0.89)	0.203	10	0.38 (0.11 to 0.65)	0.197	11	0.47 (0.18 to 0.76)	0.390
Duration of intervention									
<12 months	7	0.52 (0.37 to 0.67)	Ref	4	0.35 (0.15 to 0.55)	Ref	5	0.33 (-0.08 to 0.73)	Ref
≥12 months	10	0.53 (0.19 to 0.87)	0.982	10	0.29 (0.012 to 0.56)	0.846	8	0.49 (0.13 to 0.84)	0.552
Average session per month									
<4 sessions	7	0.58 (0.12 to 1.05)	Ref	6	0.43 (-0.00 to 0.86)	Ref	6	0.46 (-0.01 to 0.93)	Ref
≥4 sessions	10	0.45 (0.28 to 0.63)	0.698	8	0.15 (0.04 to 0.26)	0.243	7	0.39 (0.12 to 0.66)	0.793
Personnel									
Professionals	2	1.38 (0.46 to 2.31)	0.004	1	-	-	1	-	-
Paraprofessionals	8	0.44 (0.24 to 0.64)	Ref	8	0.18 (0.03 to 0.34)	Ref	7	0.32 (0.12 to 0.52)	Ref
Community volunteer	5	0.34 (0.17 to 0.50)	0.592	4	0.27 (0.00 to 0.54)	0.572	4	0.13 (0.02 to 0.24)	0.251
Volunteer + paraprofessionals	2	0.37(-0.20 to 0.95)	0.790	1	-	-	1	-	-

N= number of trials in subgroup analysis. ^a P value is derived from meta-regression and corresponds to the test of subgroup differences.
Abbreviations: ES Effect Size, CI Confidence Interval

Supplementary Table 6b: Pooled estimates of integrated interventions versus usual care by intervention characteristics for growth outcomes

Subgroup	N	LAZ/HAZ z score ES (95% CI)	N	WAZ z score ES (95% CI)	N	WLZ/WHZ z score ES (95% CI)
All studies	10	0.004 (-0.06 to 0.07)	8	0.02 (-0.05 to 0.08)	7	0.003 (-0.07 to 0.07)
Delivery mode						
Individual visits	3	0.04 (-0.09 to 0.17)	3	0.05 (-0.11 to 0.20)	4	-0.03 (-0.12 to 0.05)
Individual visits and group sessions	4	-0.02 (-0.12 to 0.08)	2	0.03 (-0.10 to 0.16)	1	-
Group sessions	3	-0.07 (-0.33 to 0.08)	3	0.03 (-0.09 to 0.16)	2	0.09 (-0.16 to 0.36)
Number of Behaviour Change Techniques						
<3	2	-0.01 (-0.10 to 0.08)	2	-0.04 (-0.13 to 0.05)	1	-
≥3	8	0.007 (-0.09 to 0.09)	6	0.06 (-0.03 to 0.14)	6	0.05 (-0.04 to 0.13)
Duration of intervention						
<12 months	6	-0.03 (-0.16 to 0.10)	4	0.12 (-0.01 to 0.25)	3	0.13 (-0.01 to 0.27)
≥12 months	4	0.02 (-0.05 to 0.09)	4	-0.02 (-0.09 to 0.05)	4	-0.04 (-0.11 to 0.04)
Average session per month						
<4 sessions	6	0.02 (-0.06 to 0.11)	5	0.02 (-0.08 to 0.11)	4	-0.02(-0.09 to 0.06)
≥4 sessions	4	-0.03 (-0.15 to 0.08)	3	0.04(-0.07 to 0.16)	3	0.06 (-0.11 to 0.23)
Personnel						
Professionals	1	-	1	-	1	-
Paraprofessionals	3	-0.02 (-0.29 to 0.27)	4	0.13 (-0.13 to 0.39)	4	0.02 (-0.14 to 0.19)
Community volunteer	4	-0.02 (-0.12 to 0.08)	3	0.04 (-0.07 to 0.14)	2	0.05 (-0.07 to 0.17)
Volunteer + paraprofessionals	2	0 (-0.13 to 0.13)	1	-	-	-

N= number of trials in subgroup analysis.

Note: We did not conduct the test of subgroup differences for the growth outcomes because overall ESs for any growth outcome was not significant.

Abbreviations: ES Effect Size, CI Confidence Interval, LAZ/HAZ Length-for-age/height-for-age z score, WAZ Weight-for-age z score, WLZ/WHZ Weight-for-length/weight-for-height z score