WFP
World Food Programme
SAVING LIVES
CHANGING LIVES

Social Protection Pathways to Nutrition

Rapid evidence review

August 2023

institute of development studies

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE
IFPRI

Social Protection Pathways to Nutrition
Rapid evidence review
August 2023

Nicholas Nisbett[1], Leah Salm[1], Keetie Roelen[1], Giulia Baldi[2], Carla Mejía[2], Juan Gonzalo Jaramillo Mejia[3], Fiorella Paredes Cauna[1], Aulo Gelli[4], Deanna Olney[4], Emily Vooris[1], Laura Casu, Marie Ruel

[1] Institute of Development Studies, University of Sussex, Brighton, UK
[2] World Food Programme, Regional Bureau in Panama
[3] World Food Programme, Rome
[4] International Food Policy Research Institute, Washington D.C.

How to cite:
Nisbett, N., Salm, L., Roelen., K. et al. (2022). Social Protection Pathways to Nutrition Rapid Evidence Review, Brighton, UK: IDS, WFP & IFPRI.

Acknowledgements

We are grateful to all participants in the study from Ecuador; Guatemala; Peru and the Dominican Republic, as well as to those who participated in a workshop in Washington, D.C. in June 2022, including colleagues from the International Food Policy Research Institute (IFPRI), Nutrition International, the World Food Programme (WFP), the Economic Commission for Latin America and the Caribbean (ECLAC), the Food and Agriculture Organization (FAO) and the Development Bank of Latin America and the Caribbean (CAF). We are grateful to those who supported this event including Sara Bernardini, Beverley Abreu and Jamed Falik. Many thanks to Ben Jackson for IDS project co-ordination throughout. We are particularly grateful to Marie Ruel for her contribution to the evidence review and her guidance; as well as to Ursula Trubswasser for her kind external review of that paper.

Social Protection Pathways to Nutrition

Rapid evidence review

institute of development studies

WFP World Food Programme

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE IFPRI

WFP/Giulio d'Adamo

Contents

WFP/Esteban Barrera

1. Background and objectives

The Social Protection Pathways to Nutrition Study is a partnership between the Institute of Development Studies (IDS), International Food Policy Research Institute (IFPRI) and World Food Programme (WFP), funded by WFP. The overarching goal of the Social Protection Pathways to Nutrition study is to review the evidence and propose an analytical and operational framework with the different pathways to nutrition identified, with a focus on multiple indicators of malnutrition, linking social protection with health and food systems. It seeks to strengthen the positive impacts of social protection interventions in the Latin American and Caribbean (LAC) region on diet and nutritional status outcomes, by building a robust evidence-base focused on 'what works', 'how' and 'why', to contribute to enhanced wellbeing in the region.

The study has three sub-objectives:

i) Improve the conceptualization of the linkages of social protection to achieve positive diet and nutrition outcomes, offering an analytical and operational framework. It will identify the key pathways in the LAC context, with a focus on the double burden of malnutrition and to the extent possible how these programmes interact with the food and health systems.

ii) Unpack the impact pathways by jointly exploring the design and implementation features of different social assistance instruments that identify roadblocks and enablers that hinder or facilitate positive nutritional outcomes in the short to long run.

iii) Identify a roadmap to actively mainstream nutrition into social protection policy and programming to incorporate nutrition along the policy and programme cycle.

Social protection programmes (SPP) are increasingly being implemented in low- and middle-income countries to address underlying determinants of malnutrition and food insecurity (de Groot et al., 2015; Devereux and Nzabamwita, 2018; Floate, Marks and Durham, 2019; Manley and Slavchevska, 2019). As a subcategory of social protection initiatives, social assistance programmes (SAPs) usually provide disbursement through monetary transfers, food assistance and other forms of support (Olney et al., 2021). In contrast to other social protection approaches, SAPs are non-contributory based resources as compared to social insurance schemes (Olney et al., 2021). SAPs have the potential to improve household income and autonomy to access more food resources, expand accessibility and affordability of health services and improve health outcomes, increase the accessibility and affordability of diverse, nutritious foods and improve food consumption patterns (Adato and Bassett, 2009; Devereux and Nzabamwita, 2018; Laar, Aryeetey, Mpereh and Zotor, 2017; Little et al., 2021; Owusu-Addo, Renzaho and Smith, 2018). Other complementary social assistance interventions may address the desirability of healthy foods through improved nutrition knowledge, establishing access to water, sanitation and hygiene (WASH) infrastructure by incorporating gender targeting elements to contribute towards female caregiver agency (Bauchet et al., 2021; de Souza, Mingoti, Paes-Sousa and Heller 2021; Olney et al., 2021; Owusu-Addo et al., 2018; Roelen et al., 2017). Furthermore, literature has begun to assess whether social protection programmes adequately address gender equity and women's empowerment through direct distribution of benefits to women (Armand, Attanasio, Carneiro and Lechene, 2020; Bauchet et al., 2021; Molyneux, Jones and Stavropoulos, 2016).

Previous literature has connected SAP to outcomes of reduced undernutrition and improved diet diversity, though the evidence is mixed and dependent on

a range of factors to do with programme design, targeting or specifics related to the SPP modality, e.g. type and size of transfer and transfer recipient (de Groot et al., 2017; Floate, Marks and Durham, 2019; Manley and Slavchevska, 2019; Manley et al., 2020; Little et al., 2021; Olney et al., 2021). While the LAC region was a source of much of the original literature in this area - especially in relation to conditional cash transfers (CCT) (Ruel, Leroy and Verhofstadt, 2009) much of the recent focus in international literature has turned to countries in Sub-Saharan Africa and Asia. SAP increasingly constitute broader packages of support designed to help extreme poor communities 'graduate' from poverty (Adato and Bassett 2009; Manley and Slavchevska, 2019; Roelen, Sherer and Himmelstine, 2020) or improve human development outcomes (such as gender empowerment, education, livelihood opportunities, health) as well as including nutrition through complementary interventions (Little et al., 2021; Roelen et al., 2017). More recently, literature has evaluated the prevalence and distribution of multiple burdens of undernutrition and overweight/obesity (Heckert et al., 2020; Leroy, Olney and Ruel 2019; Olney, Leroy, Bliznashka and Ruel, 2018), with studies highlighting the need for programmes to include double burden concerns in programme objectives and actions, as a counterweight to the traditional focus on undernutrition, hunger and poverty.

WFP/Henry Barreto

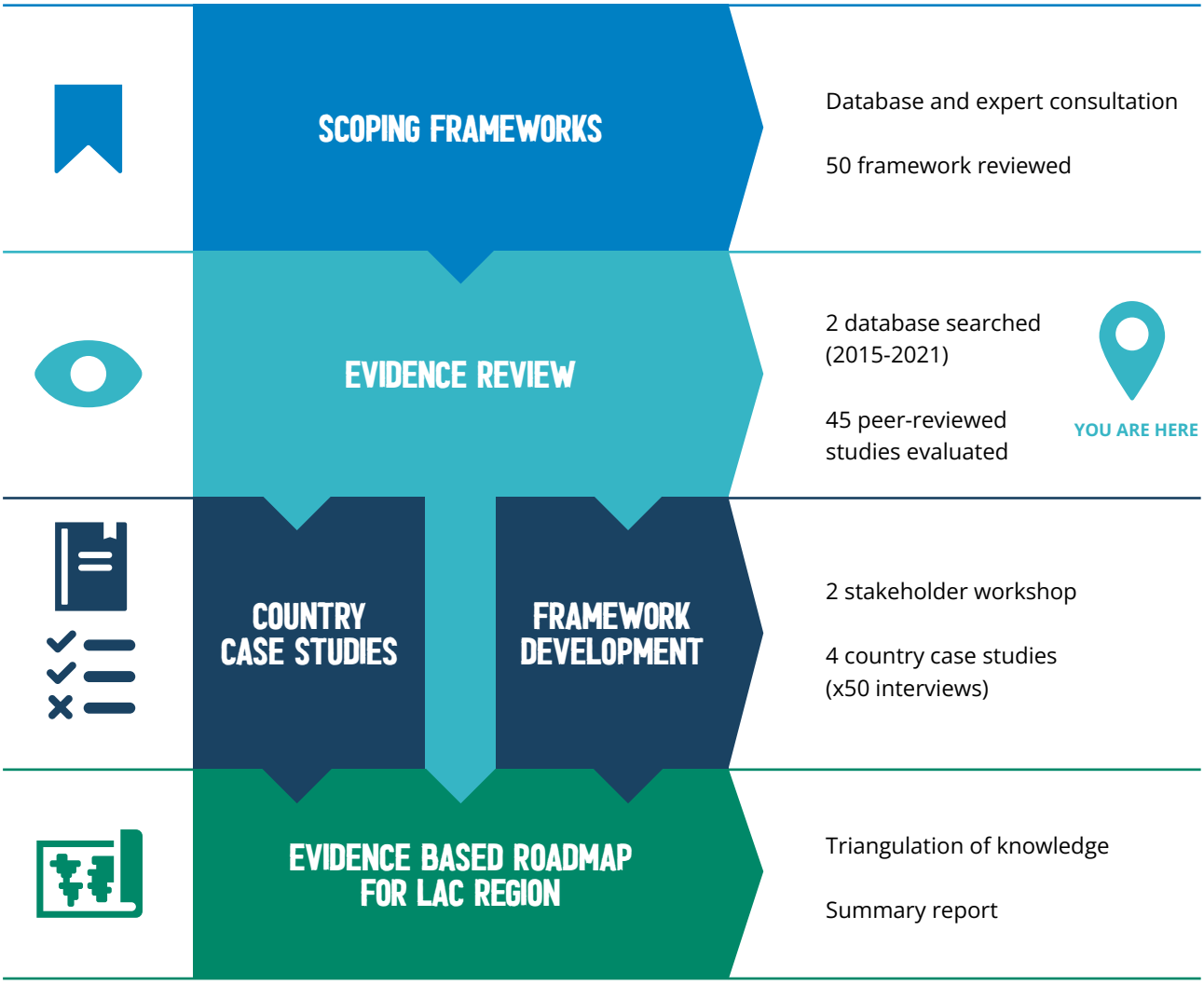
2. Structure and approach of this review

To meet the objectives outlined above, this project aims to integrate evaluation, conceptual and experiential evidence to unpack this complex area. This evidence review is one component of this, contributing to the *evaluation evidence* (Figure 1).

This report details the methods and results of scoping frameworks and the evidence. The findings will feed into the development of operational and analytical frameworks which will be developed through a series of internal and external workshops, as well as informing four country case studies.

The objectives of scoping existing frameworks and the evidence are to assess established and emerging evidence on the linkages between social protection and nutrition, with a particular focus on the coexistence of multiple forms of malnutrition at both the individual and household levels (undernutrition, obesity/overweight and micronutrient deficiencies).

Figure 1
Wider project structure of activities



3. Research questions

To design the scoping study, we translated the objectives above into two research questions (RQ). These are:

1. What is the evidence on positive or negative effects on nutrition and dietary outcomes from social protection programmes (SPP) in Latin America and the Caribbean?

2. What pathways to impact are suggested and/or evidenced by studies of social protection and nutrition outcomes in Latin America and the Caribbean?

4. Initial scoping of frameworks and concepts (global)

As a first step, the team searched for broad conceptual evidence on SPP and nutrition and dietary outcomes to assess available evidence and identify research gaps. Several databases and grey-literature websites were searched. This initial search was done without any geographical limitations. Web of Science, PubMed and SCOPUS were identified as key databases for the topic. Databases were searched with a combination of key terms such as "social protection" OR "social assistance" and nutrition. Additionally, the websites WFP, IFPRI and socialprotection.org provided additional conceptual and policy resources detailing the implementation of SPP across the world. In addition to identifying literature on the impact of SPP on the double burden of malnutrition, a search was conducted to evaluate common conceptual frameworks to illustrate pathways linking social protection and nutrition. Databases including PubMed, Web of Science and SCOPUS were searched using the additional terms "framework" and "impact pathways" to identify key literature. Further frameworks were extrapolated from snowball searches within reference lists of these papers, as well as through internal expert consultation. We retrieved 105 publications, including the 15 systematic reviews identified in the previous step, and, following the removal of duplicates, 73 studies were screened. A total number of 56 studies were relevant and used to construct the 'meta-framework' to guide the extraction of key information for the evidence review.

Fifteen systematic review articles were identified; these provided further insight into the existing evidence base on links between SPP and nutrition outcomes. Important findings that influenced our thinking and search approach include: (i) studies primarily concentrated on target populations of children under the age of 5 years, low income households, female caregivers and school-aged children (Ahmed, Hoddinott and Roy, 2021; Ahmed et al., 2021; Britto et al., 2017; de Groot et al., 2017; Fernald and Hidrobo, 2011; Floate et al., 2019; Hidrobo et al., 2014; Kristjansson et al., 2015; Laar et al., 2017; Little et al., 2021; Manley et al., 2020); (ii) most studies gathered evidence on either the role of SPP in reducing poverty, improving women's empowerment, and/or providing shock resistance to COVID-19; (iii) conditional cash transfers (CCTs), were the most studied type of SPP, followed by school feeding programmes and health insurance benefits; (iv) for nutrition outcomes, studies primarily emphasized undernutrition in young children under the age of 5, diet diversity and diet quantity for school aged children, or dietary diversity measured at the household level; and (v) many of the studies that focused on or reported research conducted in Latin America were published before 2010 (Adato and Bassett, 2009; de Groot et al., 2017; Hidrobo et al., 2014; Manley et al., 2020), with more recent literature focusing on Sub-Saharan Africa or on low-income countries across several regions (Britto et al., 2017; Kristjansson et al., 2015; Lassi et al., 2021; Little et al., 2021; Onwuchekwa, Verdonck and Marchal, 2021; Sherr et al., 2020; Visser, McLachlan, Maayan and Garner, 2018). Finally, the 15 reviews also provided insight into potential pathways on how SPP can increase individual and household autonomy over family income and consumption choices, increase the access and availability of (types of) food and improve nutritional knowledge when social behavioral change communication was included in the package of interventions (de Groot et al. 2017; Floate et al. 2019).

Based on our review of systematic reviews and consideration of the information available from across data sources, we identified several gaps in relation to the objectives of this study. Few studies evaluated the impact of SPP on nutrition outcomes such as wasting, micronutrient deficiencies, overweight and obesity, non-communicable diseases, or the double burden of malnutrition at a household or individual level. Further, these reviews provided little information regarding the Caribbean and more recent literature on Latin America. This initial scoping of concepts and broad evidence reviews allowed for a more specific and targeted literature search for **primary empirical** evidence on the impacts of individual SPPs. The following steps describe the targeted search strategy for those primary studies of SPPs, in the LAC region only.

5. Search strategy and screening for LAC evidence review

We used the Population, Intervention/Exposure, Comparison, Outcome, Setting (PICOS) framework to translate the research question into search syntax (Table 1).

A structured search was undertaken in the bibliographic databased MEDLINE and Web of Science. The search strategy was developed in MEDLINE using a variety of Medical Subject Heading (MeSH) terms and general nutrition terms, as well as broad free-text terms (Table 2). All eligible documents from 2010 onwards in English, Spanish and Portuguese were downloaded for screening. Through the screening process, we further refined our criteria to include only those published in 2015 onwards (to November 2021). This date was chosen to capture those contemporary programmes that specifically focus on nutrition and diet outcomes in their design; with the assumption that earlier studies would be considered in the scoping phase of reviews and frameworks.

The search strategy and search terms therefore built on earlier studies conducted by the IDS and IFPRI teams; particularly, e.g., recent work for FAO, WFP and for the Lancet Series on the Double Burden of Malnutrition, so as not to duplicate work (Alderman and Mustafa, 2013; de Groot et al., 2015, 2017; Devereux and Nzabamwita, 2018; Floate et al., 2019; Gentilini, 2007; Gentilini and Omamo, 2009; Hawkes et al., 2020; Kurdi, Ghorpade and Ibrahim, 2019; Roelen et al., 2020).

Discussions were held between WFP, IFPRI and IDS teams to consider the scope of some of the broader interpretations of 'social protection'. It was decided, for example, not to include links to wider forms of social support such as health insurance that are primarily implemented through other sectors including the private sector. This informed the decision on search terms, as well as on inclusion and exclusion criteria below. The full set of search terms is included in Annex A, structured by the PICOS framework.

Titles of the retrieved studies were screened against predetermined eligibility criteria (Table 2). Where titles were ambiguous as to their relevance, the abstract was read. One researcher completed this stage and then the included studies were double screened by a second researcher. Any disagreements related to the inclusion of studies were discussed, and a third member of the team consulted to allow for a final decision of the inclusion or exclusion of the paper.

Table 1

PICOS table for study

Population	Intervention	Comparison	Outcome	Study setting
Any population group	• General social protection • Cash • Cash + • Food transfers • School meals • Youth Programmes	None	• Studies reporting on nutritional outcomes including stunting, wasting, overweight, micronutrient deficiencies, anemia, low birth weight. • Infant and young child feeding practices (breastfeeding and complementary feeding). • Studies reporting diet-related non-communicable diseases (NCDs), hypertension, high blood pressure etc. • Studies reporting on dietary outcomes such as diet diversity/ quality and consumption patterns both intended and unintended effects on nutrition outcomes. • Studies reporting on nutrition knowledge and perceptions.	Latin American and Caribbean countries

Table 2

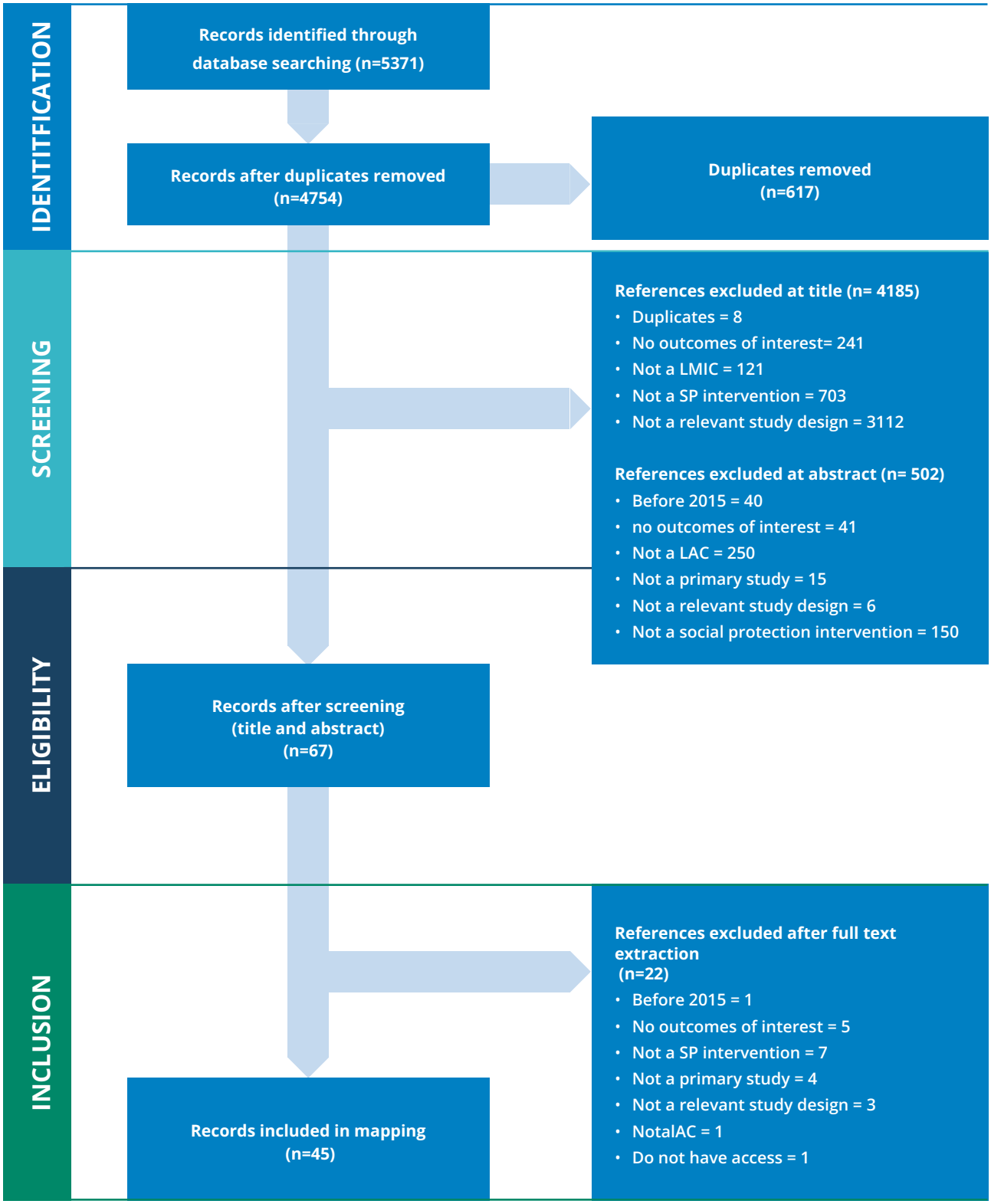
Eligibility criteria to guide screening

PICOS	Inclusion criteria	Exclusion criteria
Population **All Populations** **Both individuals and households**	• Inclusion of all beneficiary populations including mothers, pregnant women, women of reproductive age (15-49y), lactating mothers, infants, and children. Also including households if benefits are provided at the household level.	• Non-beneficiary populations.
Intervention/exposure **General social protection** **Cash & cash +** **Food transfers** **School meals** **Youth Programmes**	• Inclusion of studies reporting on impact of social protection and assistance programmes (e.g. social assistance, safety nets, social insurance, labor market interventions). • Inclusion of studies reporting on impact of cash transfers and cash plus. • Inclusion of studies reporting on the impact of food transfers and school meals. • Inclusion of livelihoods, graduation, public works, youth, and empowerment interventions that include direct transfers of cash or food. • Inclusion of health insurance when tied to other social protection with clear linkages (cash + or cash transfer etc.). • Inclusion of emergency social protection measures. • Inclusion of agricultural interventions when clearly linked to social assistance.	• Exclusion of health insurance when provided on its own. • Exclusion of universal health coverage. • Exclusion of studies that focus on exclusively agriculture interventions in the form of agricultural subsidies or agricultural incentives.
Outcomes **Undernutrition & micronutrient deficiency** **IYCF** **Diet & consumption** **Obesity & NCDs**	• Studies reporting on nutritional outcomes of all populations including undernutrition (stunting, wasting, underweight, low birth weight, mortality due to malnutrition, morbidity due to malnutrition), micronutrient deficiencies (including iron deficient anemia, other forms of anemia, vitamin A, calcium, iron, vitamin B, folate, among others), child complementary feeding practices etc. • Studies that report diet related NCDs, hypertension, high blood pressure etc. In any given population. • Inclusion of dietary diversity, quality, and quantity (either at an individual or household level). • Inclusion of studies that do not have the primary objective of changing nutrition outcomes but do measure it as a secondary outcome.	• Exclusion of studies that do not report on at least one of these nutritional or diet-related outcomes. • Exclusion of studies that vaguely mention potential benefits for nutrition (e.g., in the introduction) without detailing the outcomes measured (except for qualitative studies).
Setting **LAC**	• Studies that report one or multiple countries included in Latin America and/or the Caribbean region. • Inclusion of data on a regional, national, and subnational (district, village, community) level. • Inclusion of multi-country studies that include 1 or more LMIC/ LAC countries.	• Exclusion of studies based on global data and/or emphasis on high-income countries. • Exclusion of LAC populations living in non-LAC countries.
Study type	• Any intervention type (including randomized controlled trials, quasi-experimental studies, or any other policy or intervention evaluation), also including qualitative literature, progress reports, etc., reporting on a given intervention or programme. • Commentaries, where based on evidence or conceptual development.	• Exclusion of articles that provided opinion-based commentary rather than evidence-based analysis.
Grey Literature	• NA	• No grey literature was included in this phase of the review. • Exclusion of blogs, news releases, events, factsheets and brochures, policy briefs.
Timeframe	• Studies published from 2015-November 2021.	• All studies published before that time.

WFP/Jose Luis Zapata

Figure 2 below provides a graphical representation of studies included and excluded at various stages of the review according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) reporting guidelines (Moher et al., 2009).

Figure 2
PRISMA flowchart of search results



6. Extraction and coding

For our evidence review, we developed a meta-framework to guide data extraction and analysis of social protection pathways to nutrition and diet outcomes. The development of the meta-framework drew upon an interactive approach that employed both inductive and deductive reasoning. The process consisted of seven steps, namely:

1) Internal consultation on broad conceptualizations within fields of relevance to define the scope of the review;
2) Identification of existing frameworks;
3) De-construction into key constituting elements of existing frameworks;
4) Construction of meta-framework for informing extraction matrix building;
5) Extraction matrix building;
6) Testing the meta-framework to guide coding instructions; and
7) Utilization of the meta-framework for data extraction.

The extraction matrix was developed in Microsoft Excel based on categories identified through the scoping for frameworks. A document detailing coding style and format providing examples for each category was tested and revised following discussion and agreement by the wider IDS-IFPRI-WFP research team (Annex 2). The matrix was subsequently tested on 6 included papers to assess its suitability for the study objectives and the practicability and time of the extraction process. Testing was conducted in a purposeful manner to determine whether matrix categories were suitable for the variety of studies identified. This was conducted by three researchers who then compared extractions.

The extraction matrix and coding template were then used to extract information from the included documents. Column headings of the extraction matrix included: Author, Year of publication, Title, Type of document, Domain, Social protection sector, Geographical area, Policy cycle stage, Setting, Study design, Sampling, Social protection intervention type, Transfer modality, Conditionality status, Type of conditionality, Conditionality sectors (such as education, health), Targeted population(s), Lifecycle stage(s), Delivery platform(s), Coverage, Outcomes, Forms of malnutrition (taxonomy), Measured impact on nutrition outcomes, Equity, Anticipated impact timeframe, Operational framework, Impact pathways described, Stated limitations, Stated assumptions, Additional contextual information.

A full list of the extraction matrix headings is provided in the coding template in Annex 2.

7. Synthesis of findings

7.1 Description of the evidence base

A total of 45 publications were identified as meeting all eligibility criteria. These studies presented information on a variety of SPP in both Central and South America. The publications include an analysis of ten countries including Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador Guatemala, Honduras, Mexico, and Peru. Most studies focused on interventions within Mexico and Brazil with 10 and 19 articles for each country, respectively. Argentina, Bolivia, Chile, and Honduras were represented in one study each. Ecuador and Guatemala's social protection programmes were reported in two publications each. Colombia was discussed in three papers, and Peru was presented in 5 studies. None of the studies covered the Caribbean.

Although 45 publications were included, they report on just 17 programmes across the 10 countries. Many publications reported on the same programme such as Brazil's Bolsa Familia Programme (PBF) (n=12) and Mexico's *Progresa – Oportunidades – Prospera* programme (CCT-POP) (n=8). Six publications reported on Brazil's National School Feeding Programme (PNAE). *Familias en Acción, Programa Comunitario Materno Infantil de Diversificación Alimentaria (PROCOMIDA), Programa de Apoyo Alimentario (PAL)* were individually represented in two articles each. *Juntos* was evaluated in three articles. The remaining SPPs were reported in one article each. It should also be noted that all SPP types included in this review are non-contributory and classified as SAPs. (See Table 3 for an overview of countries and programmes included in this study).

Table 3

Studies identified by country and programme name

Country	Programme	Type of programme	No of studies
Argentina	TFA Food Assistance Scheme	Unconditional food transfer	1
Bolivia	Bolivia Experimental Food Transfer	Unconditional food transfer	1
Brazil	*Bolsa Familia* Programme (PBF)	Conditional cash transfer	12
	Programa Nacional de Alimentação Escolar (PNAE)	School feeding	6
	The Milk Program	Unconditional food transfer	1
Chile	Chilean National School Feeding Program	School feeding	1
Colombia	*Familias en Acción*	Conditional cash transfer	2
	Colombian National School Feeding Program	School feeding	1
Ecuador	Bono Desarrollo Humano (BDH)	Conditional cash transfer	1
	Experimental Programme	Unconditional food transfer	1
Honduras	Pilot Programme for HIV antiretroviral therapy recipients	Conditional Food Transfer	1
Guatemala	*Programa Comunitario Materno Infantil de Diversificación Alimentaria* (PROCOMIDA)	Conditional food transfer	2
Mexico	*Programa de Apoyo Alimentario* (PAL)	Conditional food transfer	2
	Progresa–Oportunidades–Prospera (CCT-POP)	Conditional cash transfer	8
Peru	*JUNTOS*	Conditional cash transfer	3
	Comedores Populares	Conditional food transfer	1
	Qali Warma	School feeding	1
All	**Total**		**45**

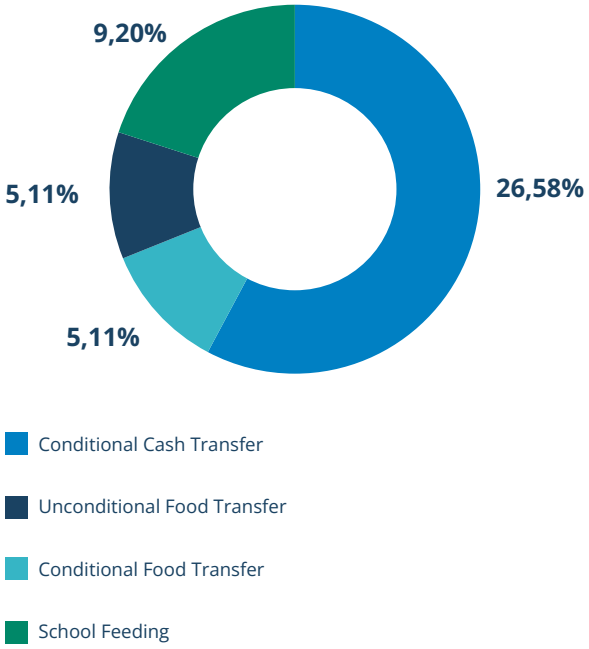
7.2 Characteristics of identified social protection programmes

This section reviews the characteristics of the SPP included in our review. Our search identified five types of SPP, namely conditional cash transfer (CCT) (5 programmes evaluated across 26 articles), conditional food transfer (4 programmes in 6 articles), unconditional food transfer (4 programmes, in 4 articles), school feeding, and school feeding programmes with agricultural subsidies (4 programmes, 9 articles) (Figure 3). We see a large proportion of the literature retrieved reported on CCTs (n=26 studies) due to the large volume of literature reporting on the long-running programmes *Bolsa Familia* in Brazil, and the various iterations of Mexico's *Progresa–Oportunidades–Prospera* (POP) (Figure 2). Although multiple studies report on the same intervention, we do not see duplication of data across studies. One exception is studies 994 and 997; although they appear to be reporting on the same data set, each study reports on different outcome indicators and therefore both were included.

As noted above, all SPP types can be categorized as SAPs. They were designed to target low-income households through multi-layered interventions. While in-kind transfers were often disbursed through the female caregiver, the overall goal of the programmes reviewed was to prevent the intergenerational transmission of poverty. Additionally, SPPs were evaluated for their impact on nutrition outcomes for targeted children, women of reproductive age, pregnant and lactating women (PLW), and households.

Four programmes, including *Bolsa Familia, POP, Juntos and Familias en Acción*, transferred benefits to beneficiaries using a cash plus modality, meaning participants received cash alongside other benefits such as food supplements, and/or home visits from community health workers. One programme, *Bono Desarrollo Humano*, reported that participants received monetary payments only. Four food transfer interventions described beneficiaries receiving food plus additional benefits such as health education or agricultural subsidies. Five programmes provided food transfer only. Three articles representing three different programmes did not specify how the programmes distributed support. For beneficiaries to receive cash or food assistance, most programmes had conditionalities. These conditionalities included attending health clinic check-ups, participating in pre- and post-natal monitoring, joining nutrition and health education sessions, and receiving required vaccinations. Additionally, in some programmes, children within participant households were required to attend school regularly. While not explicitly clear from all articles, one study mentions these conditionalities were not routinely monitored [1361].

Figure 3
Studies identified by type of social protection programme



SPPs were implemented across a variety of sectors. We identified multiple sectors involved in the design, implementation, or evaluation of the social protection initiatives. Seven articles mentioned social protection only as the sector for social assistance. However, most publications mentioned a combination of sectors involved in the identified SPP. Twenty-seven articles, equating to 60 per cent of the studies, identified the health sector, including family and reproductive health, involved as a conditionality element to these programmes. Nutrition and early childhood development departments followed as the second and third commonly identified sectors involved in these programmes. Other sectors included agriculture, water and sanitation, and education.

7.3 Nutrition outcomes

A variety of nutrition outcomes were evaluated across the 45 studies. Outcomes were grouped into broad categories for the convenience of reporting, these include undernutrition, micronutrient deficiencies, dietary outcomes (quantity, diversity, quality), overweight and obesity, infant and young child feeding practices (IYCF), and nutrition knowledge. Figure 4 provides an overview of the number of identified articles by outcome grouping and Table 4 provides full details of reported indicators. Note that articles rarely reported on just one indicator. Twenty-two per cent (n=10) of articles evaluated indicators of both under- and overnutrition, reflecting concern about the double burden of malnutrition in targeted populations.

The group of outcomes most reported on is dietary diversity/ quality/ consumption (n=21). This group has a large variety of diet-related outcomes ranging from frequency and consumption of different food groups to household expenditure on diverse foods, to consumption of ultra-processed foods, to the nutritional quality of school meals.

Thirty-eight per cent (n=17) of publications, representing 8 programmes, reported indicators categorized as an undernutrition outcome. These indicators included measurements of stunting, wasting, underweight, poor growth, mortality, and morbidity related to malnutrition (see table 4). However, most of the articles (n=9 of 17) reported on the prevalence of stunting in children in a range of ages from under 2 years old, to 18 years old.

Outcomes of overweight and obesity were also measured in 36 per cent of the articles (n=16). Body mass index (BMI) was commonly measured to indicate weight status and subsequently overweight or obesity prevalence across age populations. Thirty-one per cent (n= 14) of articles measured indicators of micronutrient deficiencies with iron deficient anemia in women and children being the most common indicator. Nine per cent (n=4) publications mentioned infant and young child feeding (IYCF), including breastfeeding of children under 2, and caregiver IYCF knowledge. Seven per cent (n=3) of articles evaluated the nutrition knowledge of beneficiaries.

Although some SPPs in this review are designed to reach broader target audiences, the articles identified key beneficiaries based on lifecycle stages. Most studies assessed the impact of the intervention on women, either at reproductive age or while pregnant and lactating, and school children aged between 5 to 17 years. Other publications reported on outcomes for children under 2 years of age, children under 5 years of age, adults, and households as a whole.

Figure 4

Articles identified by measured grouped nutrition outcomes

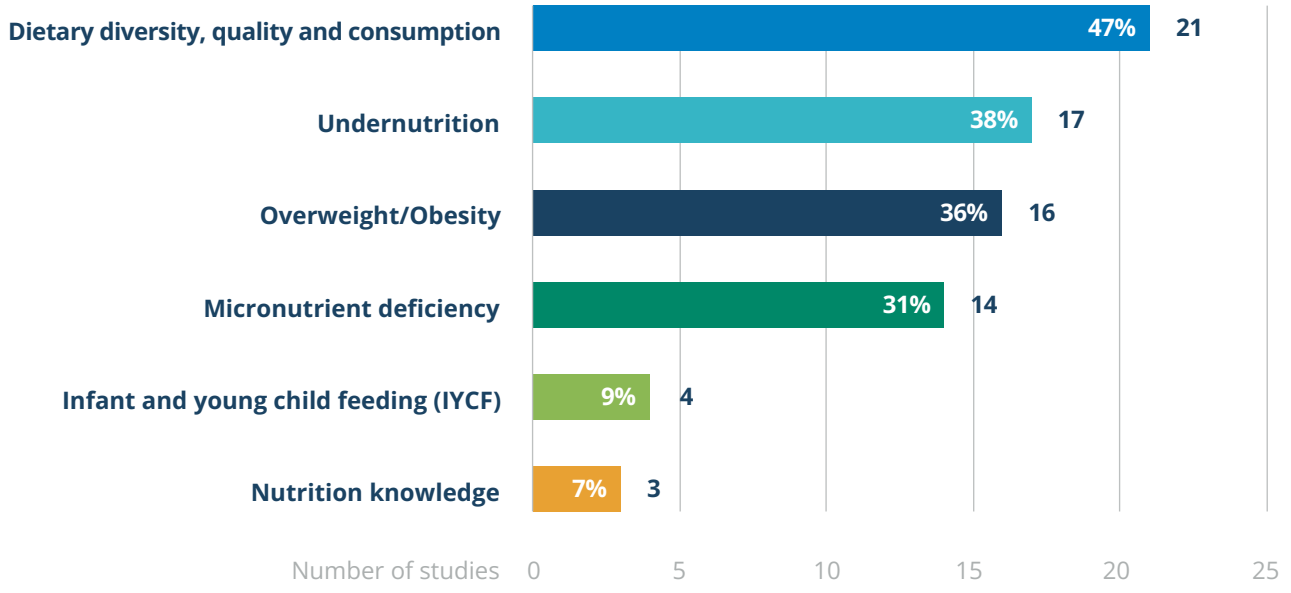


Table 4

Nutrition outcomes and effects per programme

Programme (SPP type)	Taxonomy	Indicators	Population	Effect	ID
PAL (CCT)	Dietary Diversity	Consumption iron-fortified foods	U2	Positive	119
		Frequency of consumption of different food groups and complementary feeding	U2	Positive	119
		Frequency of consumption of different food groups	WRA	Positive	1973
	Micronutrient deficiencies	Iron deficiencies	U2	Positive	119
PNAE (School feeding)	Dietary diversity	Protein and kilocalories production	HH	Positive	421
		Availability and consumption of produced fruit, legumes and vegetables (FLV)	HH	No effect	1964
		School purchases of FLV for meals	HH	Positive	1973
	Undernutrition	Stunting	<18 y	No effect	1964
		Infant Mortality	U2	No effect	421
		Underweight	U2	No effect	421
	Obesity and Overweight	BAZ	11-19 yr	Positive	4124
		BMI	adults	No effect	1964
	Micronutrient deficiencies	Iron deficiency anemia	<18 y	No effect	1964
		Iron deficiency anemia	Adults	Negative	1973
	Nutrition Knowledge / Perceptions	Acceptance of school meals	Students and staff	No effect	2636
PBF (CCT)	Dietary Diversity	Frequency of consumption of different food groups and complementary feeding	U2	Positive	505
		Frequency of consumption of different food groups	WRA	No effect	1092
		Frequency of consumption of different food groups	HH	Positive	2409
		Consumption of UPF	U2	Negative	554
		Consumption of FLV	School aged children	Positive	2167
	Undernutrition	Stunting	U2	No effect	505
			U2	Negative	1514
		Stunting / HAZ	U5	No effect	196
		Stunting	<18 y	No effect	2167
		Thinness/WAZ	2-6 yr	Negative	1514
		WAZ	U5	No effect	1968
		Mortality	U5	Positive	994
		Morbidity	U5	Positive	997
		Underweight	Pregnant and lactating adolescents	Positive	4532

Programme (SPP type)	Taxonomy	Indicators	Population	Effect	ID
PBF (CCT)	Obesity and Overweight	BMI	U5	No effect	1968
		BMI	School aged children	No effect	496
		BAZ	5-18 yr	No effect	2167
		BMI	Pregnant and lactating adolescents	Negative	4532
	Micronutrient deficiencies	Iron deficient anemia	U2	Positive	505
		Iron deficient anemia	<18 y	No effect	2167
		Iron deficiency	<18 y	No effect	2167
		Vitamin A deficiency	<18 y	No effect	2167
	Infant and Young Child Feeding	Breastfeeding	U2	Positive	505
			U2	No effect	554
FA (CCT)	Dietary Diversity	Frequency and consumption of different food groups	< 7y	Positive	4267
	Undernutrition	Stunting/HAZ	2-6 yr	No effect	1091
		Thinness/WAZ	2-6 yr	Positive	1091
	Obesity and Overweight	BMI	2-6 yr	No effect	1091
	Nutrition Knowledge / Perceptions of nutrition	Sociocultural acceptance and factors of programme	Students and staff	No effect	4267
Ecuador Experimental (CFT)	Dietary Diversity	Frequency of consumption of dif food groups	HH	Positive	2414
		Consumption of kilocalories	HH	No effect	2414
PROCOMIDA (CFT)	Dietary Diversity	Frequency of consumption of dif food groups	HH	Positive	3198
	Obesity and Overweight	BMI	PLW	Negative	3496
	Nutrition Knowledge / Perceptions	Nutrition knowledge	Caregivers	Positive	3198
Bolivia Experimental (UFT)	Dietary Diversity	Frequency of consumption of dif food groups	HH	No effect	4208
	Undernutrition	Vitamin A deficiency	<18 y	No effect	4208
	Obesity and Overweight	BAZ	5-18 yr	No effect	4208
	Micronutrient deficiencies	Iron deficient anemia	<18 y	No effect	4208
QaliWarma (School feeding)	Dietary Diversity	Consumption of (FLV)	School aged children	No effect	3102
	Undernutrition	Thinness	6-12 yr	Positive	3102
	Obesity and Overweight	BMI	School aged children	No effect	3102
	Micronutrient deficiencies	Deficiencies: Vit E, Iron, E, B1, Calcium	6-12 yr	No effect	3102
Chilean School Feeding	Dietary Diversity	Nutritional content of school meals	School aged children	No effect	3263

Programme (SPP type)	Taxonomy	Indicators	Population	Effect	ID
Colombian School Feeding	Dietary Diversity	Nutritional content of school meals	School aged children	No effect	3808
	Micronutrient deficiencies	Iron deficiency	<18 y	No effect	3808
JUNTOS (CCT)	Dietary Diversity	HH expenditure on diversity and quality of food	HH	Negative	1455
			HH	Positive	4170
	Undernutrition	Underweight	WRA	Positive	2148
	Obesity and Overweight	BMI	WRA	Positive	2148
	Micronutrient deficiencies	Iron deficient anemia (individual level)	U6	Positive	2148
		Iron deficient anemia (when compared to other districts)	U6	Negative	2148
		Iron deficient anemia	PLW	Negative	2148
POP (CCT)	Undernutrition	Stunting	U2	No effect	120
	Obesity and Overweight	BMI	Adults excluding PLW	Positive (short term)	793
			Adults excluding PLW	No effect (long term)	793
	Micronutrient deficiencies	Iron deficient anemia	U2	No effect	120
		Iron deficient anemia	12-36 months	Positive	246
		Iron deficient anemia	U5	Positive	1971
		Iron deficient anemia	PLW	No effect	120
	Infant and Young Child Feeding	Knowledge of IYFC	WRA	Positive	4157
			WRA	No effect	4113
	Nutrition Knowledge / Perception	Nutrition knowledge	Caregivers	Positive	4157
Milk Program (UFT)	Undernutrition	Stunting/HAZ	2-6 yr	No effect	1990
		Thinness/WAZ	2-6 yr	No effect	1990
	Obesity and Overweight	BMI	2-6 yr	No effect	1990
BDH (CCT)	Undernutrition	Mortality	U5	Positive	4019
Comedores Populares (CFT)	Obesity and Overweight	BMI	WRA	Negative	2382
Vaso de Leche (CFT)	Obesity and Overweight	BMI	< 8 yr	Positive	2382
Honduras Experimental (CFT)	Obesity and Overweight	BMI	PLHIV	Negative	2383
(Argentia TFA UFT)	Micronutrient deficiencies	Iron deficiencies	U2	Positive	2991

WFP/Carlos Alonzo

7.4 Analysis of SPP types and outcomes

Our analysis includes 45 articles with 17 unique interventions evaluated. Most studies evaluated CCTs, with 12 studies focusing on Brazil's Bolsa Familia Programme (PBF). Other CCT included Peru's *JUNTOS, Mexico's Progresa-Oportunidades-Prospera* (POP), *Colombia's Familias en Acción*, and Ecuador's *Bono de Desarrollo Humano* (BDH). Conditional and unconditional food transfers were also common. National conditional food transfer programmes include *Programa de Apoyo Alimentario* (PAL), *Comedores Populares and Vaso de Leche*, and PROCOMIDA. Several experimental interventions investigated the impact of unconditional cash transfers in Ecuador, Argentina, Bolivia, and Honduras. Finally, school feeding programmes in Brazil, Peru, Colombia, and Chile demonstrate the potential of SPP administered through school environments. Several studies in Brazil highlight the connection between agricultural subsidies supporting its school feeding programme and extended nutrition impact for these farming households.

We find mixed effects of SPP on nutrition and dietary indicators. Results vary widely across programme types, intervention modalities and outcome indicators. We discuss findings by type of SPP, specifically illustrating each programme's nutrition impact and intended pathway for impact. Where appropriate, different elements of programme design are discussed and linked to nutritional and dietary outcomes. Next, we reflect on the balance of findings and quality of evidence. Finally, to the extent possible, we report how these initiatives interact with broader food and health systems.

CONDITIONAL CASH TRANSFERS

Most literature was retrieved for CCTs. Five unique CCT programmes are highlighted through 26 individual studies.

Bolsa Familia Programme (PBF)

Twelve articles concentrated on Brazil's conditional cash transfer programme called *Bolsa Familia* Programme (PBF) [496; 505; 554; 994; 997; 1092; 1375; 1514; 1968; 2157; 2409; 4532]. This national programme offers a monthly transfer of cash to low-income households using a debit card issued in the name of the primary female caregiver [1092]. For families to receive the benefit, they must adhere to conditionalities including attending required healthcare visits for both adults and children in the household and ensuring children regularly attend school [554; 994; 997; 1092; 1375; 1514; 1968; 2157; 2409; 4532].

WFP/Giulio d'Adamo

Nutrition outcomes

Reports on Brazil's Bolsa Familia Programme (PBF) offer conflicting results on nutrition outcomes.

Several publications, evaluate the effect of PBF on undernutrition in children by measuring indicators of stunting [505; 1514; 1968; 2167], thinness based on weight for age z-scores (WAZ) [1514; 1968]; morbidity [997] and mortality [994] related to nutrition. The outcomes represent a case in point in terms of mixed effects. Two studies report positive effects on undernutrition for children under 5 years as measured by mortality [994] and morbidity [997]. PBF is also shown to have positive effects on underweight for pregnant and lactating adolescent girls [4532]. Three studies report no association of PBF on stunting in the following age groups U2 [505]; U5 [1968]; under 18 years [2167]. One study finds a negative impact [1514] on stunting and wasting for children under 2.

Mixed results are also presented for PBF's impact on micronutrient deficiencies. In [2167] school-aged children, (aged 5-18) in the SPP and in the control group showed similar prevalence of micronutrient deficiencies associated with anemia, iron, and vitamin A deficiencies. These results indicated PBF had no effect on undernutrition for this age group. In contrast, [505] suggests the intervention has positive effects on iron deficient anemia for children under two.

Similarly, dietary diversity outcomes are conflicting. For example, three studies report positive effects of PBF on the frequency and consumption of different food groups: in children under 2 [505], and for students in primary school [2167]. Both [2167] and [2409] measure dietary diversity at a household level. One study indicated a positive effect on dietary diversity at a household level measured by increased consumption of multiple food groups including legumes and vegetables [2167]. [2409] found households receiving PBF purchased more fruits and vegetables, and less processed foods. In contrast [1092] found no impact of the programme on the frequency of consumption of different good groups for WRA.

Furthermore, mixed results were presented regarding the prevalence of overweight and obesity, generally measured by BMI. Three studies found no effect of PBF on BMI in children. [2167] found no difference in BMI for age z-score (BAZ) for children between 5 years and 18 years participating in the programme and those not enrolled. Other studies found no impact on BMI for children under 5 [1968] and school-aged children, 5- 14 years [496]. In contrast, one study reported PBF influenced increases in measured BMI of pregnant and lactating adolescent girls [4532].

In terms of dietary outcomes, evaluations on PBF indicate this CCT programme negatively or positively impacted dietary quality based on the consumption of ultra-processed foods (UFP) [1375] and IYCF practices [505; 554]. Participation in PBF was associated with higher consumption of UPF [1375] among households and the discontinuation of breastfeeding in children under the age of 2 [554]. These outcomes suggest PBF has a negative association with dietary quality and IYCF. Whereas [505] found PBF was positively associated with higher prevalence and longer rates of breastfeeding of infants.

Impact pathways

PBF is a CCT that provides additional monetary support that improved the purchasing power of beneficiaries with positive results for reducing undernutrition and improving dietary diversity outcomes [994; 997; 2409; 4532]. However, several studies challenge this pathway as ineffective and resulting in no effect on nutrition outcomes including dietary diversity [505; 554; 1375]. By measuring attendance, a few publications suggest PBF's success is associated with increased access to health services such as pre-, post-, and antenatal appoints, child well visits, and vaccination services [997; 4532]. However, another study found no difference in vaccination coverage between beneficiaries of PBF and non-participants [2167].

Pathways with a negative impact, whereby PBF did not improve dietary outcomes were associated with higher consumption of UPF, in which cash assistance was spent on highly processed food options. These undesirable effects of PBF, may be explored by evaluating the external influences on the pathway including socioeconomic characteristics, conditions in the food environment, family food insecurity, individual characteristics, complementary feeding practices and nutritional knowledge [554].

JUNTOS

Three studies evaluated JUNTOS, a CCT in Peru in which low-income households receive conditional cash transfers [1455; 2148; 4170]. Money is usually distributed to the female caregivers of the household based on the conditionalities that children regularly attend school, receive well-child health visits, and mothers participate in family planning education sessions [1455; 2148; 4170].

Nutrition outcomes

Two articles measured food expenditure and dietary consumption [1455; 4170]. While one study evaluated measurements of undernutrition and micronutrient deficiencies [2148].

The results of [1455] and [4170] suggest *JUNTOS* has a mixed influence on household dietary consumption based on who receives the cash (men or women), and the frequency the distributions are made. [1455] indicates the timing distribution of CCT can negatively impact dietary consumption based on expenditure on luxury items. Decreasing the frequency of payments increased the household budget on alcohol, tobacco, and sweets over nutritious food [1455]. [4170] evaluated where the distribution of cash through mothers affected female bargaining power and subsequently if increased female bargaining power increased expenditure on food items. When women were directly giving the funds from JUNTOS, the household spent a greater fraction of the money on food than when distributed to the male head of household [4170]. These studies suggest more frequent distribution of benefits directly to female primary caregivers should positively affect dietary expenditure.

[2148] measured multiple nutrition outcomes for children under the age of 6 years and WRA to calculate the effects of *JUNTOS* on undernutrition, overweight and anemia. Data was collected using both individual and district-level analysis. The study reported mixed outcomes. *JUNTOS* was found to positively impact children's anemia by decreasing the prevalence at individual levels, decreasing the prevalence of WRA underweight, and decreasing the prevalence of WRA overweight as measured by BMI [2148]. However, the study also reported living in a *JUNTOS* district was associated with a 9 percent increase in the prevalence of anemia in children [2148].

Impact pathways

As a conditional cash transfer, JUNTOS was assumed to provide households and female caregivers ability to purchase higher quantities of food to improve maternal and child nutrition [2148]. Another pathway to impact was created through improving female bargaining and empowerment by being the direct recipients of monetary aid [4170]. Female caregivers spent more money on food purchases; however, the dietary quality of this increased expenditure is not elaborated [4170]. However, as measured in its outcomes, one article demonstrated positive pathways can be disrupted when JUNTOS was distributed more infrequently, and the opposite of intended outcomes occurs (money is spent on luxury items such as sweets and alcohol) [1455].


WFP/Jose Luis Zapata

Progresa-Oportunidades-Prospera (POP)

Mexico's CCT programme, first referred to as *Progresa*, later evolving into *Oportunidades,* is now referred to as *Prospera* social inclusion programme [120]. Here, we use the acronym POP to refer to each of these versions of this CCT. Like JUNTOS and PBF, POP is a national conditional cash transfer programme that distributes cash to low-income families on a conditional basis. Fixed payments are distributed based on bimonthly health checkups for children, and mothers' attendance to nutrition education programmes [793; 1971; 4277; 4517].

However, there are many aspects of POP in addition to cash distribution. These additional components include the distribution of food supplements (Nutrisano – powdered milk, Vitaniño - supplement sachet added to food, and fortified milk drink) and educational subsidies as further discussed below [246; 3935; 4113]

Nutrition outcomes

Eight articles investigated the impact of POP on various nutrition outcomes [120; 246; 793; 1971; 3935; 4113; 4277; 4517]. POP is associated with mixed results on micronutrient deficiencies in children and PLW, no effect on the improvement of nutrition knowledge of WRA or IYCF practices, and positive short-term effects on the prevalence of overweight in adults (excluding PLW).

Several studies evaluated the nutrition impact of additional food supplements provided by POP on micronutrient deficiencies [120; 246; 1971]. The results showed mixed conclusions. A comparative study of the POP and another food assistance programme (amaranth flour added to food) in a district not receiving POP found that those receiving POP food supplements have a positive impact on improving anemia in children under 5 [1971]. Another study found no effect of supplements on micronutrient deficiencies or undernutrition in PLW or children under 2 [120]. In contrast, two studies found a positive impact of supplementation on children aged 12 to 36 months [246], children under 2 and PLW [4277].

Assessing the impact of cash distribution through POP, a study found a positive protective effect on adult bodyweight in the short-term but was positively correlated with an abdominal fat concentration in the long-long term [793].

Two studies [3935; 4517] evaluated POP's influence on nutrition knowledge through its health and nutrition education sessions. Both articles concluded there was no clear impact on the outcomes of mothers' nutrition knowledge [3935; 4517]. Similarly, a qualitative study investigated the breastfeeding practices of women participating in POP but reported no clear association or effect between the SPP and IYCF [4113].

Impact pathways

Like other CCTs, POP highlighted a pathway of improving cash support to purchasing an improved diet and positively effecting dietary diversity [1971]. Food supplementation provided through POP presented a pathway of additional access to nutrient dense foods and with positive effects on micronutrient deficiencies for children under 2 and PLW [246; 4277; 1971]. Studies reported an expected pathway of improved nutrition knowledge and complementary feeding gained by improving knowledge and skills through education services [3935; 4517]. However, these pathways resulted in no effect suggesting external factors could influence the effectiveness of this pathway.

One study stands out [3935] for its in-depth exploration of user perceptions of low acceptability of the intervention, reasons for low fidelity in utilization, and low penetration of the conditional cash transfer program. Reasons included language barriers (for indigenous women), overly technical language, or a lack of training of primary care givers, and inappropriate interpretation of the intervention's IYCF guidelines.

Familias en Acción (FA)

FA is a CCT programme in Colombia. This programme provides cash to mothers in poor households [1091]. The distribution of cash is conditional on both a health and educational component in which children under the age of 7 are required to attend growth, development and vaccination clinics, and other routine checkups [1091; 4267]. Additionally, mothers are expected to attend workshops on nutrition, hygiene, and contraception while children must regularly attend school [4267]. Cash is transferred to the mother through a bank account.

Nutrition outcomes

Both [1091; 4267] evaluated the impact of FA on outcomes of undernutrition and diet diversity and obesity. These studies presented positive effects on thinness in children between two and six years [1091] and dietary diversity [4267] but no effects on stunting or overweight in two to six years [1091] and maternal nutrition knowledge [4267]. One study [1091] analyzed the double burden of malnutrition among pre-school and school-aged children by measuring height, weight, stunting, BMI scores, thinness and overweight and obesity. Participating in FA slightly increased mean HAZ (height-for-age z-score) and decreased stunting overtime but this difference was not significant. BMI and prevalence of overweight and obesity declined in both treatment and control groups, suggesting the FA had no effect on these outcomes [1091]. External factors could have contributed to the decreased prevalence of overweight rates. However, the study did report a reduced prevalence of thinness measured by WAZ (Weight-for-age z-score) in two to six-year-olds.

In contrast, the other article demonstrated a positive impact of the programme on school-aged children's dietary diversity but no effect on mothers' nutrition knowledge [4267].

Impact pathways

Participation in FA was associated with improving the quality of the home diet through the increased expenditure on food and the intake of fruits and vegetables [1091; 4267]. Additionally, [4267] reported a significant increase in participation in routine health appointments.

Bono de Desarrollo Humano (BDH)

Administered in Ecuador, Bono de Desarrollo Humano (BDH) provides conditional cash transfers to families facing food insecurity with the condition that mothers and children attend preventative checkups and children attend school a minimum percentage of 80% of the year [4019]. One study [4019] in this review evaluated the impact of BDH on children under 5 mortality rates (U5MR) .

Nutrition outcomes

The study found BDH had a positive impact on U5MR resulting from malnutrition. A one per cent increase in coverage provided by BDH was associated with a decrease of 2.9 per cent in rates of mortality from malnutrition in children under 5 [4019].

Impact pathways

Including conditionalities such as attending health appointments led to an increase in the use of preventive health services and checkups [4019]. Further, positive outcomes were achieved by increasing the ability to purchase higher quality and quantity of foods at a household level.

CONDITIONAL FOOD TRANSFERS

Conditional food transfers (CFT) were the second most common SPP in the review. These SPP distribute food or food vouchers with conditionalities that the women and children in the programme attend health clinic appointments, participate in behavior change communication (BCC) education and/or their children attend school regularly.

PROCOMIDA

Programa Comunitario Materno Infantil de Diversificación Alimentaria (Mother-Child Community Food Diversification Program; PROCOMIDA) is a conditional food transfer programme provided in Guatemala [3198; 3496]. Pregnant and lactating women (PLW) and children under the age of 2 years can receive food aid if the mother participates in BCC health workshops and attend routine pre- and post- natal health appointments [3198; 3496].

Nutrition outcomes

Two studies evaluated the impact of PROCOMIDA on nutrition and diet outcomes. [3198] investigated the programme's impact on dietary diversity at a household level while [3496] evaluated PROCOMIDA's impact on PLW's weight.

One study found this CFT to have a positive impact on increasing the consumption of vegetables including carrots, green beans, green onions, local plants, potatoes, red beans, and rice, contributing to higher dietary diversity than the control group [3198]. This article also highlighted how conditional services such as BCC improved knowledge and skills related to health and food [3198]. However, the other article reported PROCOMIDA had a negative impact on PLW and increased maternal postpartum weight for women [3496].

Impact pathways

In the case of [3198], the freeing up of resources and increasing access to and frequency of consumption of specific foods including fruits and vegetables, and rice. Additionally, the supply of food can decrease the finance burden of buying foods that are provided through PROCOMIDA. By combining food assistance with BCC workshops, the education sessions can influence what participants spend additional food resources on and how to prepare the food provided. This can increase desirable dietary behaviors. However, providing food rations may also increase maternal weight and contribute to large consumption of transferred foods (rice, beans, and vegetable oil) rather than diversification of intake [3496].

Programa de Apoyo Alimentario (PAL)

Programa de Apoyo Alimentario (PAL) is a conditional food transfer programme in Mexico. Without access to other social protection schemes, rural isolated families received food provided through food baskets, or the use of debit cards restricted to food purchases [119; 1361]. Households are required to attend community-based health and nutrition education. However, these conditionalities were often not monitored [1361].

Nutrition outcomes

These two studies reported a positive impact of PAL on minimum levels of dietary diversity in children U2 [119] and in women [1361]. [119] reported an increase in the prevalence of minimum food diversity, measured by the frequency of consuming different good groups as reported by mothers, in children under 2 years. Furthermore, this study suggested PAL increased the consumption of iron-rich and iron-fortified foods (provided by the program) by children under 2 [119]. [1361] compared dietary diversity between two PAL arms: PAL EFECTIVO which distributes monetary payments and PAL SIN-HAMBRE which transfers exclusively used for food purchases. The study found the provision of food was more effective than cash to increase minimum dietary diversity in women [1361].

Impact pathways

Both articles suggest PAL and the provision of food can have a positive effect on dietary diverse by increasing the accessibility and affordability of diverse and nutritious foods through food transfers.

Comedores Populares

One article evaluated the risk of obesity among mothers in the *Comedores Populares* programme in Peru compared to children participating in the *Vaso de Leche*, (discussed subsequently). The Comedores Populares is an intervention that distributes meals to women who volunteer to cook food supplied for the local community at a subsidized price per meal [2382].

Nutrition outcomes

This study reported a higher incidence of obesity and overweight and twice the risk of becoming obese in mothers who participated in the Community Kitchen Programme as compared to those who did not participate [2382]. The study suggested these higher rates were associated with increased access to free meals plentiful in carbohydrates but lacking in fruits and vegetables.

Impact pathways

The study suggests conditional food transfers can have a negative impact pathway by contributing to excess consumption of carbohydrates and fewer fruits and vegetables [2382].

Vaso de Leche

Vaso de Leche (Glass of Milk) is a food assistance programme in Peru that distributes milk to children under the age of 8 [2382].

Nutrition outcomes

The article reported a lower risk of developing obesity for children under 8 years in the Vaso de Leche programme (when also combined with physical activity), compared to those not involved in the program [2382].

Impact pathways

Providing nutritionally rich foods, such as whole milk when combined with physical activity, can contribute to a healthy diet, and not contribute to the risk of obesity [2382].

Pilot Programme for HIV antiretroviral therapy recipients

Through a pilot intervention in Honduras, the study [2383] evaluated the impact of food support and nutrition education on food security and body weight among HIV antiretroviral therapy recipients. Beneficiaries received 12 months of food support and nutrition education, or nutrition education only [2383]. This study provided formative information regarding SPP components and their delivery to marginalized populations.

Nutrition outcomes

Combined with nutrition education, this conditional food transfer had a positive impact by reducing the probability of food insecurity in people living with HIV (PLHIV). However, the project also contributed to weight gain in the study population, who were already characterized as overweight or obese at baseline [2383].

Impact pathways

Food transfers can improve food security by increasing individual accessibility to food. Additionally, by tailoring food assistance to meet the nutritional needs of its beneficiaries, a programme could more adequately meet nutritional needs. However, the positive pathway was only successful when reinforced by nutrition education. This outcome suggests a positive impact pathway is created by improving the nutrition knowledge of beneficiaries and their ability to make use of additional food resources provided by the programme.

UNCONDITIONAL FOOD TRANSFERS

Four unconditional food transfer (UFT) programmes were described in the literature included in this review. These programmes provided food assistance to beneficiaries without conditionalities. The food transfers can be in the form of supplements, food baskets or vouchers for food. Several of the studies described were experimental programmes designed to assess the impact of UFTs on nutrition.

The Milk Programme

Located in Brazil, this unconditional food transfer programme distributes whole milk to households earning less than half a minimum wage per capita and who have children between the ages of 2 and 8 years [1990].

Nutrition outcomes

This study reported the Milk Programme had no effect on undernutrition and overweight/obesity indicators measured by a child's height, weight, or on household food insecurity score [1990].

Impact pathways

The Milk Programme was expected to improve undernutrition by providing households with an additional allocation of nutritious food [1990]. However, no clear pathway was described as the programme demonstrated no effects on nutrition outcomes measured.

Experimental Programme – Ecuador

One study evaluated the impact of two food voucher interventions on household dietary diversity in Ecuador. In this experimental design, low-income households either received unconditional food vouchers or received conditional vouchers requiring attendance to health and nutrition education workshops [2414].

Nutrition outcomes

Based on this study, food transfers can positively impact dietary diversity. Regardless of the education component, both groups receiving vouchers had a positive impact on household dietary diversity, measured by the number of days consuming different food groups [4208].

Impact pathways

A positive impact pathway was created by providing households with food transfers that improved their access to diverse food items from various food groups. The use of vouchers can support family choice in diverse food options [2414].

TFA Food Assistance Scheme Argentina

This study [2991] provided formative research on the biological and social determinants of children aged 12 to 23.9 months with iron deficiency anemia (IDA). Children were grouped based on whether they were beneficiaries of any type of food assistance including direct food transfer and/or vouchers.

Nutrition outcomes

Food assistance was associated with a lower prevalence of IDA in children under 2 years. The study discovered that non-beneficiary children had a higher prevalence of IDA [2991].

Impact pathways

Food transfers can improve the access to good quality foods and decrease micronutrient deficiencies such as anemia.

Bolivia Experimental Food Transfer

To evaluate the effect of gender targeting on diet and nutrition outcomes, one study [4208] implemented an experimental food transfer programme in the Bolivian Amazon. In a randomized fashion, female adults, as opposed to the male head of household, were given in-kind rice and seed transfers to distribute to their household. The authors analyzed food consumption patterns and the anthropometric measures of children in beneficiary houses [4208]. No conditionalities were imposed.

Nutrition outcomes

This unconditional food transfer had no effect on measured dietary diversity or anthropometric measurements independent of targeting [4208]. Further, the use of seeds and rice was used in a similar manner regardless of the gender of the receiving beneficiary. Rice was eaten and seeds were planted by all households [4208].

Impact pathways

Authors anticipated a positive impact pathway to distributing food aid directly to female caregivers in this community. This assumed pathway was expected to improve female resource bargaining, and potentially improve dietary intake of children by increasing access to foods [4208]. However, authors argue the lack of impact suggests the social norms of the *Tsimane'* (community in Bolivian Amazon) community already supports intrahousehold cooperation and equal decision making between genders [4208].

SCHOOL FEEDING PROGRAMMES

School feeding programmes covered by this review include *Programa Nacional de Alimentação Escolar* (PNAE) in Brazil, Chile's National School Feeding Program, Colombia's National School Feeding Program, and *Qali Warma* in Peru. These programmes provide free meals to students administered within a school environment [1899; 1964; 1973; 2636; 3102; 3263; 3808; 4124]. In the case of PNAE, an additional component of the school feeding programme includes agricultural subsidies dispersed to local family farmers who are providing food to the programme.

Programa Nacional de Alimentação Escolar (PNAE)

Part of Brazil's Zero Hunger Strategy includes *Programa Nacional de Alimentação Escolar* (PNAE), Brazil's national school feeding programme. This programme provides free meals to students through school attendance [421;1899; 1964; 1973; 2636; 4124]. PNAE also promotes the use of produce from family farms and is supported by another programme called *Programa Nacional de Fortalecimiento da Agricultura Familiar* (PRONAF). PRONAF gives low-interest agricultural credits to low-income farmers and increases access to price-controlled markets through the Food Acquisition Programme. To receive these benefits, farmers must meet the requirements of "family farming" determined based on locality, market accessibility and size of operation [1899].

PNAE is evaluated in six articles [421;1899; 1964; 1973; 2636; 4124], four of which also discuss PRONAF and PNAE's tied to impact on nutrition and dietary outcomes [421; 1899; 1964; 1973]. Significantly, [1964] and [1973] use the same population data (a survey of 27 families of family farmers participating in PRONAF). However [1964] provided measurement of overweight, low weight and short stature in children and adults while [1973] provided an assessment of iron-deficient anemia prevalence per household and diet as measured by caloric availability. This is further discussed below.

Nutrition outcomes

Two studies reported on impacts associated with undernutrition and reported PNAE and PRONAF had no association with indicators of stunting in children under 18 years [1964] and under two mortality or prevalence of underweight [421]. No other articles reported on indicators associated with undernutrition.

Dietary diversity indicators were measured in three studies [421; 1973; 1899]. In all three articles, PRONAF in connection to PNAE was associated with positive effects on dietary diversity on school children. [421] PRONAF increased the production of protein and kilocalories in the northeast region of the country, where baseline production and food insecurity rates were high. [1973] found a positive association with household availability and consumption of fruits and vegetables from their own production in farming

households that were beneficiaries of PRONAF. Another publication suggested PRONAF had a positive effect on the dietary diversity of school children and the quality of school meals by providing school feeding sites with 77.2 percent of the school's total fruit, legume, and vegetable purchases [1899].

Mixed results were reported on PNAE's association with the prevalence of overweight and obesity. [4214] reported a reduction in BAZ (BMI for age z scores) in 11- to 19-year-olds, suggesting participation in the school feeding program and consumption of free school meals can lower overweight and obesity rates in adolescence. In contrast, [1964] measures the impact of PRONAF benefits, connected to PNAE, on the BMI in adults in farming households. No effect was reported [1964].

One qualitative study investigated perceptions of school meals and found that meals were perceived as healthy as students knew the origins of the food. It also created a shared experience as everyone ate the same food together. Having the kitchen located in the schoolyard was favorable as students could peak in and see the process of preparation [2636].

Impact pathways

PNAE has the potential to positively impact the eating practices of students by increasing the availability of healthier (less processed) foods and of fruits and vegetables. [1899] highlights this pathway in reporting higher produce purchases by the schools from PRONAF farmers. This positive pathway was supported by positive impacts on obesity prevalence and improved dietary diversity of students. Through agricultural funds that boost livelihood and market access, PRONAF tied to PNAE can support increased availability of protein, kilocalorie production, and fruits and vegetables to both students and farming families. The presence of a stable market should provide positive pathway impacts for students and households alike.

Chile's National School Feeding Programme

The Chilean National School Feeding Programme provides free breakfast and lunch meals to students when they attend school. One study [3263] evaluated the nutritional components of these school meals.

Nutrition outcomes

The study did not evaluate the direct impact of the programme on nutrition outcomes. Rather, the study measured nutrition content of the meals and concluded phenolic compounds and antioxidant capacity of meals can be improved by providing more fruits and vegetables. The Chilean National School Feeding Programme (NSFP) did not achieve the substitution of starchy foods for vegetables, legumes, and/or fruits [3263].

Impact pathways

No impact pathways were specified, but the evaluation suggests that school meals can contribute to dietary quality by providing meals which are nutrient dense.

Colombia's National School Feeding Programme

Colombia's National School Feeding Programme provides free meals to students. One study [3808] piloted the introduction of fortified beans during free meals. Through an acceptability sensory evaluation, authors measured participants' preferences of beans based on taste, appearance, smell to determine the feasibility of introducing fortified beans as a method to address micronutrient deficiencies in students.

Nutrition outcomes

[3808] did not report on the nutrition outcome of micronutrient deficiency but found overall positive acceptance of fortified bean varieties as opposed to the regular local variety.

Impact pathways

No impact pathway was reported. However, conceptually this study suggests biofortification of beans through school meals can improve dietary diversity and address micronutrient deficiencies of students.

Qali Warma

Peru's National school feeding programme is called *Qali Warma*. Like other national feeding programmes, this national SPP provides free meals to school-aged children through the school system. One study evaluated undernutrition, measured by thinness WAZ and LAZ; (length-for-age z score) dietary diversity, measured in consumption of fruits and vegetables; overweight and obesity, measured based on BMI; and micronutrient deficiencies in children 6 to 12 years of age [3102].

Nutrition outcomes

Qali Warma reduced undernutrition, as most students presented adequate weight and height for their ages [3808]. The *Qali Warma* National School Food Programme in Peru failed to increase the consumption of fruit and vegetables as deficient intake of vitamins in A, D, C, B3 and folate was recorded [3102]. Further, students aged 10-12 also demonstrated deficiencies in calcium, iron, vitamin E and B1 [3102]. No significant association between overweight prevalence and participation in *Qali Warma* was identified.

Impact pathways

This study did not explore pathways.

HEALTH AND FOOD SYSTEM CONSIDERATIONS

In most articles, programme delivery is associated with multisectoral involvement. Conditional cash and food transfer programmes are generally tied to the health sector and/or education sectors as conditionality for monetary benefits are dependent on participation in health or education services. However, generally, the articles do not discuss the relationship between the health and food systems more broadly. A few exceptions include [994] and [997] which directly measure the coexistence of water, sanitation, and hygiene (WASH) services and SPP; one study discussing the association between physical activity, food, and social assistance environments [496] and studies evaluating school feeding as connected to agricultural subsidies [421, 1973, 1964, 1899]. [994 and 997] suggest linkage of SPP to WASH services or

other environmental health programmes can improve nutrition health outcomes by reducing malnutrition that is a result of poor hygiene and contaminated water. Assessing the simultaneous access to WASH services and Brazilian PBF on under 5 mortality [994] and under 5 morbidities [997], these articles highlighted the success of these tandem initiatives with reduced mortality and morbidity associated with malnutrition and diarrhea in children under 5. [994] further reports on lower hospitalization rates of children under 5 associated with malnutrition and diarrhea.

[496] evaluates how factors of food environments (such as where they predominately buy their food) and whether community infrastructures are conducive to physical activity and the availability of social assistance on nutrition outcomes. However, the results of the article did not find any significant association between the features of the food, physical and social assistance environment on children's nutrition outcomes.

The linkage between sectors is more explicitly discussed in relation to school meals and agricultural subsidies provided to farmers contributing to the production of these meals. Four studies highlight the relationship between meeting the nutritional needs of students by incorporating more fruits and vegetables, while also boosting the livelihoods of family farming [421, 1973, 1964, 1899]. In these articles, the approach connects the Ministry of Health, Ministry of Education and Ministry of Agriculture through PNAE and PRONAF, as a larger part of Brazil's Zero Hunger Strategy [421].

BALANCE OF FINDINGS

Overall, the studies highlighted the positive effects of SPP on dietary diversity, but mixed impacts on child anthropometry including iron-deficient anemia in children, undernutrition in women and prevalence of obesity/overweight at the household level and for individual WRA.

Six articles reported positive dietary diversity impacts on children measured by consumption of fortified foods [119] and the frequency of consumption of different food groups [505; 119; 4267; 2167;1899]. SPPs were also associated with positive impacts on household dietary diversity as discussed by six studies [421; 2409; 2414; 3198; 1973; 4170].

Mixed impacts were reported for both children's and women's undernutrition. Several studies provide evidence of programmes decreasing the prevalence of undernutrition measured by indicators of WAZ in children under 5 [1091]; the prevalence of thinness in two- to six-year-olds [3102]; mortality rates [994; 4019] and morbidity rates [997] in children under 5; and underweight in pregnant and lactating adolescents [4532] and in WRA [2148]. However, [1514] measured the negative impact of PBF on stunting and wasting prevalence in children under two. In contrast, five studies [120; 505; 1964; 2167; 4208] reported no effect of SPP on stunting prevalence in children. Two highlighted no difference in WAZ in under 6 years when participating in various programmes [1990; 1968]. Further, nine studies found no impact on these anthropometric indicators or iron deficiency anemia [4208; 496; 1092; 2167; 1968; 1964; 1990; 1091; 2383].

The same programmes are associated with negative or no effects on rates of overweight and obesity [1091; 1990; 1968; 496; 2167; 4208; 1964; 793; 4532; 3296; 2383]. A few studies linked the presence of social protection interventions with increased consumption of ultra-processed foods by adults and the prevalence of overweight and obesity in children and women [554; 1091; 1092; 1990; 3496; 4532]. Several authors suggested these mixed outcomes of the studies may be a result of other contributing factors common in beneficiary groups such as lower socioeconomic status, nutritional transitions and other factors associated with poverty [554; 1091; 1092; 1990; 3496; 4532].

Thus, the evidence remains varied regarding the prevalence of both undernutrition and obesity/overweight following the implementation of SPP. Multiple authors call for the need to adjust social protection programmes to provide "double protection" more accurately from undernutrition and overweight and obesity [4277; 3496; 1091; 2532] – actions that could be referred to as double duty actions (Hawkes et al. 2020). There is consensus that double-duty actions need to be integrated into the transfer programme's design and implementation, especially in Latin America where most countries are at advanced stages of the nutrition transition and ultra-processed foods, beverages, and snacks rich in energy, saturated fats, salt and added sugar are widely available and heavily marketed (Popkin and Ng, 2022).

WFP/Elias Miranda

7.5 Impact pathway

The reporting of impact pathways is variable and for the most part, not in-depth. The exception to this are some qualitative studies which give a more nuanced and in-depth account of both the direct SPP impact pathways and/or the external factors that affect the perceptions or utilization of a given SPP intervention. Most articles allude to pathways in terms of the imagined pathways of effect, while others identify and measure the pathway components explicitly (such as dietary diversity, nutrition knowledge, etc.). Furthermore, those reporting no effects or negative effects sometimes describe these potential negative pathways too. This is particularly the case when considering the double burden of malnutrition whereby cash or food transfers may increase access to and consumption of UPFs, which are associated with poor quality diets and increased risks of overweight/obesity, diet-related non-communicable diseases and all-cause mortality (Popkin et al., 2021).

This section separates the pathways in terms of the impact the intervention had on outcomes, as this seemed to change how pathways were described sometimes. Defining both the explicit and implicit impact pathways will be an important part of the later phases of this research. For example, some articles highlight pathways of impact through diet quality and further measure nutrition indicators such as stunting or EBF. However, the evidence from the studies here is limited due to the lack of detailed descriptions of impact pathways, thus we present preliminary results; these will be taken forward into further analysis and guide the expert consultation to fill the gaps in current literature and knowledge.

PATHWAYS IN STUDIES WITH POSITIVE AND MIXED IMPACT

Less than half of studies report positive effects on nutrition outcomes (n=27)[1]. The programmes which report some positive impacts are mostly CCTs (n=17) which describe a pathway of **improving incomes (through cash support)**, leading in turn to improved purchasing power for an improved diet, with positive effects for undernutrition, anemia and dietary diversity outcomes [119, 997, 421, 994, 1091, 1971, 2148, 2167, 2409, 4019, 4277, 4267]. Increased income is also seen as reducing immediate poverty when combined with education conditionality, which was found to improve school enrolment as measured in one study [2167]. CCTs also highlighted a pathway through **improving women's empowerment**, either through being the recipients of cash and **increasing bargaining power** within the household [4170], and/or through **increasing knowledge and awareness** that could improve IYCF practices [4267]. However, the improvements in IYCF practices that would have been achieved via this women's empowerment pathway were not measured.

Multiple articles reporting on CCTs also describe improved **access to health services** as a pathway to improved nutrition (child vaccination, antenatal appointments, growth monitoring and check-ups, all examples of health services provided) [997, 1091, 2148, 2167, 4019, 4267, 4532]. Two studies [994; 997] highlight positive pathways that are created through **improvements in WASH** to improved nutrition. [994] reported decreases in mortality in children under 5 in communities that had access to both environmental health services (including WASH) and PBF. Likewise, the same population [997] reported a positive reduction in morbidity associated with malnutrition and diarrhea in the same age group and community.

Other studies reporting positive impacts are conditional food transfers [3198, 2414, 2382], non-conditional food transfer [2383], food assistance [2991], and supplementation (as part of PROSPERA) [246]. The pathway reported in all of these is improved access to foods and **improved diet quality**. One of the conditional food transfers [3198] also reports how the behavior change communication component also provided **knowledge and skills** in food preparation as well as **awareness** of the health benefits of certain foods. This study also specifically discussed the synergies of both pathways (improved access to food

1 This section includes studies that report positive effects, and well as positive and mixed effects (the breakdown of which is positive effects only (n=17), positive and no effect (n=6), and positive and negative effects (n=4)). These are all reported together because the impact pathways are generally not separated out for positive or negative impacts on outcomes.

and greater knowledge and skills) and how these were **mutually** reinforcing and therefore more effective in improving nutrition than by themselves (this is the only study that explicitly discussed the synergies of both a transfer and the conditionalities). Three of the studies which report positive impacts on dietary diversity were school feeding programmes [1899, 3102, 4124], one of which also has an agricultural subsidies component for producers of food for school meals [1899]. One study does not explore the pathways [3102]. The other two again report **improved diet quality** as the pathway to improved nutrition. In one instance, [4124] the legislation/guidelines of the program, such as sourcing minimally processed foods and sourcing from local farmers, is seen as further reinforcing this pathway. An indirect beneficial pathway is also improvements in eating habits and the culture of eating in school. For the intervention also providing subsidies to farmers [1899], the additional pathway highlighted was **improvements in farmers' income/livelihoods**.

PATHWAYS IN STUDIES WITH NO EFFECT

Studies with no effect included three school feeding programmes [3808, 3263, 1964] and two unconditional food transfers [1990, 4280]. These studies mostly report the expected pathway of improved diet quality as improving nutrition, although only one study reported in detail the reasons why the intended impact did not occur [4208]. This study was a food transfer whereby food was distributed to women, with the intended impact that this would improve allocation and utilization. It was found that this indigenous population already had equal power-sharing dynamics, therefore utilization was the same if given to a man or woman and had no positive nutrition impact.

PATHWAYS IN STUDIES WITH NEGATIVE IMPACT

Four studies reported only negative impacts on nutrition outcomes (all related to diet diversity or quality and/or overweight/obesity). Four are conditional cash transfers [554, 1375, 1455, 1514] and one is a conditional food transfer [3496]. These articles are based on the assumed pathway that i**ncreasing income or food supply** (plus conditionalities related to education attendance and/or utilization of health services and/or some level of health and nutrition education) will improve purchasing power and decision-making around food, and therefore improve diet diversity/ quality. The opposite occurred in these studies whereby the programme did not improve diet quality or diversity (because **cash was used to purchase non-merit goods** such as alcohol and sweets [1455], when overweight/obesity is already prevalent in the population prior to the intervention and/or increased consumption of certain foods leading to overweight/obesity [3496]).

In the absence of the desired effects on nutritional outcomes, two studies described why this may occur by exploring the **external influences** on the pathway. External influences described include socioeconomic characteristics, environmental conditions including poor sanitation, family food insecurity, individual characteristics, and sub-optimal IYCF practices [554, 1375].

IMPLEMENTATION PATHWAYS

Two studies also describe how features of implementation may lead to negative impacts on the prevalence of overweight/obesity outcomes; these can be considered as indirect 'implementation pathways' [1455,3496]. The **frequency and quantity of the CCT** are seen as an implementation pathway that can lead to negative impacts on household dietary quality through increased consumption of alcohol and sweets [1455]. A conditional food transfer found that the timing of the food ration may have led to a negative impact by increasing the prevalence of overweight [3496].

STUDIES NOT REPORTING IMPACT BUT WITH FINDINGS RELEVANT TO CONCEPTUAL DEVELOPMENT

Five studies do not report impacts on outcomes measured. These are mostly qualitative [2636, 4113, 4517, 3935], and explored beneficiary perceptions of the intervention. This tends to be richer in detailed, context-specific information. This level of context-specific information is useful to understand the 'nuts and bolts' of why an intervention may succeed in achieving the desired pathways. These less direct 'implementation pathways' will be explored in more depth in the next round of analysis.

GAPS AND IMPORTANT OBSERVATIONS

This review reveals several gaps in the existing literature regarding the measurement of SPP components, measurement of nutrition and dietary indicators and proposed impact pathways.

First, conditionality adherence and participation within the SPPs were generally not measured or mentioned within the articles. While most publications described the elements of conditionalities when introducing the programme, few measured whether these requirements were followed by the population. This raises additional questions as to whether the attendance to these services further benefited the beneficiaries as evidenced in the measured nutrition or dietary outcomes. Measuring adherence and participation in these condition services would allow future studies to disaggregate the data and evaluate the significance of this element of the programme.

Second, there is yet an incomplete consideration of the double burden of malnutrition, despite the high prevalence of obesity, overweight and NCDs across the LAC region.

Five programmes mention the need for double-duty policies [496, 554, 1091, 1092, 1990, 3496, 4277, 4532] and measure the coexistence of undernutrition and overnutrition indicators. However, the remaining articles do not report on this. Although awareness of the double burden is becoming more commonplace, there was no evidence of how interventions have been designed or implemented in a way to avoid it explicitly.

While all the articles highlighted the significance of SPP in their introduction and generally outlined the intended impacts of the intervention, not all publications measured whether the nutrition outcomes were explicitly reached through these assumed pathways via measurement of upstream indicators along the impact pathway. For example, nine publications [119, 421, 505, 524, 1964, 2167,3102, 4208, 4277] suggested improving dietary diversity can have a positive impact on anthropometric measurements. These articles measured both dietary diversity and anthropometric indicators but generally did not find any effect on measured forms of malnutrition. Only one study [4277] reported positive impacts on both dietary diversity and micronutrient deficiencies. As such, these pathways are not explicitly supported through the data. Additionally, more studies should measure these pathways directly to provide more clarity on explicit linkages rather than assumed connections.

Additional analysis should be conducted to interpret the intersections of social protection programmes with the health and food systems. Although a few studies elaborated on the role of food and health environments on measured outcomes [994, 997] or discussed linkages with broader services within the health and agriculture sectors [421, 1973, 1964, 1899, 2167], these integrations should be further explored. For example, what is the quality of care of the health services provided as a conditionality in CCT? What are the benefits and challenges of subsidizing local family farmers for their participation in school meal procurement? Further, wider food system dynamics can challenge the efficacy of SPP objectives. Food environments including provision, marketing, location and taxes can dictate the availability, affordability and accessibility of healthy food (Alvarado et al., 2020; Goncalves et al., 2019; Herforth and Ahmed, 2015; Pérez-Ferrer et al., 2019). If healthier options remain too expensive and food environments increasingly gear families towards cheaper but unhealthy foods, additional household income through cash transfers may only marginally help families.

Finally, although the review analyzed the impacts of 17 different interventions, most of the literature concentrated on three large interventions PBF, POP and Juntos. Further research should be conducted to provide more nuanced qualitative and process reporting to unveil how pathways occur in different contexts and in these other SPP.

The quality of evidence was not formally assessed given the rapid nature of this review. As a precaution, we include only peer-reviewed literature. We allowed for a variety of study designs with an aim to capture the more nuanced process reporting and qualitative findings which may describe the pathways in more detail than a traditional randomized-control trial, however, this evidence base remains limited. There is a need for further insights to be captured across all stages of SPP monitoring and evaluation.

WFP/Giulio d'Adamo

8. Conclusion

This study aimed to outline the connections between social protection and diet/malnutrition while highlighting the key pathways to improving nutritional outcomes in the LAC context. We analyze 45 articles detailing 17 unique interventions implemented across ten Latin American countries. These publications present mixed results regarding negative and positive impacts on different nutrition indicators. SPP in the form of conditional and unconditional food transfers demonstrate positive effects on dietary diversity/quality/consumption. However, the impact of undernutrition and overweight/obesity remains varied across interventions and studies. These diverse findings suggest social protection programmes must be further improved through stronger designs and stronger implementation to provide better protection against multiple forms of malnutrition in LAC with accompanying considerations related to unhealthy food environments. Improved reporting on features of implementation is also essential to get finer detail of how and why an intervention works in a given context.

This report forms the first part of a wider study, which will take the findings forward to expert review and further case study and evidence gathering to build an operational framework to help understand the potential links between SPP pathways and other factors determining multiple forms of malnutrition in LAC. While reporting on pathways was found to be variable in the studies reviewed, in the next phase we will combine pathways identified in the existing frameworks scoped at the beginning of this study with the additional evidence and hypothesized pathways examined here. It is expected that information available from the operational and field experience of WFP and others will start to expand the number of hypothesized pathways, some of which may then become the subject of future research and evaluation targeted specifically at tackling multiple burdens of malnutrition in LAC countries.

References

Adato, M. and Bassett, L. (2009). 'Social protection to support vulnerable children and families: the potential of cash transfers to protect education, health and nutrition', AIDS Care 21.sup1: 60–75, http://doi.org/10.1080/09540120903112351

Ahmed, A.U.; Hoddinott, J.F. and Roy, S. (2021). Transfer Modality Research Initiative: Impacts of Combining Social Protection and Nutrition in Bangladesh (p. 2), Washington, DC: IFPRI

Alderman, H. and Mustafa, M. (2013). 'Social protection and nutrition', in Panel 3: Social Protection and Nutrition, Rome: FAO

Alvarado, M.; Harris, R.; Rose, A.; Unwin, N.; Hambleton, I.; Imamura, F. and Adams, J. (2020). 'Using nutritional survey data to inform the design of sugar-sweetened beverage taxes in low-resource contexts: a cross-sectional analysis based on data from an adult Caribbean population', BMJ Open 10.9: e035981, http://doi.org/10.1136/bmjopen-2019-035981

Armand, A.; Attanasio, O.; Carneiro, P. and Lechene, V. (2020). 'THE EFFECT OF GENDER-TARGETED CONDITIONAL CASH TRANSFERS ON HOUSEHOLD EXPENDITURES: EVIDENCE FROM A RANDOMIZED EXPERIMENT', ECONOMIC JOURNAL 130.631: 1875–1897, http://doi.org/10.1093/ej/ueaa056

Bauchet, J.; Undurraga, E.; Zycherman, A.; Behrman, J.; Leonard, W. and Godoy, R. (2021). 'The effect of gender targeting of food transfers on child nutritional status: experimental evidence from the Bolivian amazon', JOURNAL OF DEVELOPMENT EFFECTIVENESS 13.3: 276–291, http://doi.org/10.1080/19439342.2021.1924833

Britto, P.R.; Lye, S.J.; Proulx, K.; Yousafzai, A.K.; Matthews, S.G.; ... Bhutta, Z.A. (2017). 'Nurturing care: promoting early childhood development', The Lancet 389.10064: 91–102, http://doi.org/10.1016/S0140-6736(16)31390-3

de Groot, R.; Palermo, T.; Handa, S.; Ragno, L.P. and Peterman, A. (2015). Cash Transfers and Child Nutrition: What We Know and What We Need to Know, Innocenti Working Paper (p. 33), Florence: UNICEF Office of Research

de Groot, R.; Palermo, T.; Handa, S.; Ragno, L.P. and Peterman, A. (2017). 'Cash Transfers and Child Nutrition: Pathways and Impacts', Development Policy Review 35.5: 621–643, http://doi.org/10.1111/dpr.12255

de Souza, A.A.; Mingoti, S.A.; Paes-Sousa, R. and Heller, L. (2021). 'Combined effects of conditional cash transfer program and environmental health interventions on diarrhea and malnutrition morbidity in children less than five years of age in Brazil, 2006-2016', PLOS ONE 16.3, http://doi.org/10.1371/journal.pone.0248676

Devereux, S. and Nzabamwita, J. (2018). 'Social protection, food security and nutrition', IDS Working Papers 2018.518: 40

Fernald, L.C.H. and Hidrobo, M. (2011). 'Effect of Ecuador's cash transfer program (Bono de Desarrollo Humano) on child development in infants and toddlers: A randomized effectiveness trial', SOCIAL SCIENCE & MEDICINE 72.9: 1437–1446, http://doi.org/10.1016/j.socscimed.2011.03.005

Floate, H.J.; Marks, G.C. and Durham, J. (2019). 'Cash transfer programmes in lower-income and middle-income countries: understanding pathways to nutritional change-a realist review protocol', BMJ OPEN 9.5, http://doi.org/10.1136/bmjopen-2018-028314

Gentilini, U. (2007). Cash and Food Transfers: A Primer (p. 34), Rome: World Food Programme

Gentilini, U. and Omamo, S.W. (2009). Unveiling Social Safety Nets, 20 (p. 28), Rome: World Food Programme

Goncalves, V.S.S.; Duarte, E.C.; Dutra, E.S.; Barufaldi, L.A. and Carvalho, K.M.B. (2019) 'Characteristics of the school food environment associated with hypertension and obesity in Brazilian adolescents: a multilevel analysis of the Study of Cardiovascular Risks in Adolescents (ERICA)', PUBLIC HEALTH NUTRITION 22.14: 2625–2634, http://doi.org/10.1017/S1368980019001010

Hawkes, C.; Ruel, M.T.; Salm, L.; Sinclair, B. and Branca, F. (2020). 'Double-duty actions: seizing programme and policy opportunities to address malnutrition in all its forms', The Lancet 395.10218: 142–155, http://doi.org/10.1016/S0140-6736(19)32506-1

Heckert, J.; Leroy, J.L.; Olney, D.K.; Richter, S.; Iruhiriye, E. and Ruel, M.T. (2020). 'The cost of improving nutritional outcomes through food-assisted maternal and child health and nutrition programmes in Burundi and Guatemala', MATERNAL AND CHILD NUTRITION 16.1, http://doi.org/10.1111/mcn.12863

Herforth, A. and Ahmed, S. (2015). 'The food environment, its effects on dietary consumption, and potential for measurement within agriculture-nutrition interventions', Food Security 7.3: 505–520, http://doi.org/10.1007/s12571-015-0455-8

Hidrobo, M.; Hoddinott, J.; Peterman, A.; Margolies, A. and Moreira, V. (2014) 'Cash, food, or vouchers? Evidence from a randomized experiment in northern Ecuador', Journal of Development Economics 107: 144–156, http://doi.org/10.1016/j.jdeveco.2013.11.009

Kristjansson, E.; Francis, D.K.; Liberato, S.; Jandu, M.B.; Welch, V.; Petticrew, M. (2015). 'Food supplementation for improving the physical and psychosocial health of socio economically disadvantaged children aged three months to five years', Cochrane Database of Systematic Reviews .3, http://doi.org/10.1002/14651858.CD009924.pub2

Kurdi, S.; Ghorpade, Y. and Ibrahim, H. (2019). The Cash for Nutrition Intervention in Yemen: Impact Evaluation Study, Regional Program: Middle East and North Africa 19 (p. 66), Washington, DC: International Food Policy Research Institute

Laar, A.K.; Aryeetey, R.N.O.; Mpereh, M. and Zotor, F.B. (2017). 'Improving nutrition-sensitivity of social protection programmes in Ghana', Proceedings of the Nutrition Society 76.4: 516–523, http://doi.org/10.1017/S0029665117001136

Lassi, Z.S.; Padhani, Z.A.; Rabbani, A.; Rind, F.; Salam, R.A. and Bhutta, Z.A. (2021). 'Effects of nutritional interventions during pregnancy on birth, child health and development outcomes: A systematic review of evidence from low- and middle-income countries', CAMPBELL SYSTEMATIC REVIEWS 17.2, http://doi.org/10.1002/cl2.1150

Leroy, J.L.; Olney, D.K. and Ruel, M.T. (2019). 'PROCOMIDA, a Food-Assisted Maternal and Child Health and Nutrition Program, Contributes to Postpartum Weight Retention in Guatemala: A Cluster-Randomized Controlled Intervention Trial', The Journal of Nutrition 149.12: 2219–2227, http://doi.org/10.1093/jn/nxz175

Little, M.T.; Roelen, K.; Lange, B.C.L.; Steinert, J.I.; Yakubovich, A.R.; Cluver, L. and Humphreys, D.K. (2021) 'Effectiveness of cash-plus programmes on early childhood outcomes compared to cash transfers alone: A systematic review and meta-analysis in low- and middle-income countries.', PLoS Medicine 18.9: e1003698, http://doi.org/10.1371/journal.pmed.1003698

Manley, J.; Balarajan, Y.; Malm, S.; Harman, L.; Owens, J.; Khurshid, A. (2020). 'Cash transfers and child nutritional outcomes: a systematic review and meta-analysis', BMJ Global Health 5.12: e003621, http://doi.org/10.1136/bmjgh-2020-003621

Manley, J. and Slavchevska, V. (2019). 'Are cash transfers the answer for child nutrition in sub-Saharan Africa? A literature review', Development Policy Review 37.2: 204–224, http://doi.org/10.1111/dpr.12346

Moher, D.; Liberati, A.; Tetzlaff, J.; Altman, D.G.; and for the PRISMA Group. (2009). 'Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement', BMJ 339.jul21 1: b2535–b2535, http://doi.org/10.1136/bmj.b2535

Molyneux, M.; Jones, N. and Stavropoulos, M. (2016). 'Gender, Urban Poverty and social protection: Lessons from Latin America', in G. of Ministry of Housing and Urban Poverty Alleviation and O. Prakash Mathur (eds), State of the Urban Poor Report 2015: Gender and Urban Poverty (pp. 176–193), New Delhi, India: Oxford University Press, http://global.oup.com/academic/product/state-of-the-urban-poor-report-2015-9780199466719 (accessed 28 February 2022)

Olney, D.K.; Gelli, A.; Kumar, N.; Alderman, H.; Go, A.; ... Benammour, O. (2021) Nutrition-sensitive social protection programs within food systems, IFPRI Discussion Paper, Washington, DC: International Food Policy Research Institute, https://ebrary.ifpri.org/digital/collection/p15738coll2/id/134593 (accessed 15 December 2021)

Olney, D.K.; Leroy, J.; Bliznashka, L. and Ruel, M.T. (2018). 'PROCOMIDA, a Food-Assisted Maternal and Child Health and Nutrition Program, Reduces Child Stunting in Guatemala: A Cluster-Randomized Controlled Intervention Trial', The Journal of Nutrition 148.9: 1493–1505, http://doi.org/10.1093/jn/nxy138

Onwuchekwa, C.; Verdonck, K. and Marchal, B. (2021). 'Systematic Review on the Impact of Conditional Cash Transfers on Child Health Service Utilisation and Child Health in Sub-Saharan Africa.', Frontiers in Public Health 9: 643621, http://doi.org/10.3389/fpubh.2021.643621

Owusu-Addo, E.; Renzaho, A.M.N. and Smith, B.J. (2018). 'The impact of cash transfers on social determinants of health and health inequalities in sub-Saharan Africa: a systematic review', Health Policy and Planning 33.5: 675–696, http://doi.org/10.1093/heapol/czy020

Pérez-Ferrer, C.; Auchincloss, A.H.; Menezes, M.C. de; Kroker-Lobos, M.F.; Cardoso, L. de O. and Barrientos-Gutierrez, T. (2019). 'The food environment in Latin America: a systematic review with a focus on environments relevant to obesity and related chronic diseases', Public Health Nutrition 22.18: 3447–3464, http://doi.org/10.1017/S1368980019002891

Popkin, B.M.; Barquera, S.; Corvalan, C.; Hofman, K.J.; Monteiro, C.; … Taillie, L.S. (2021). 'Towards unified and impactful policies to reduce ultra-processed food consumption and promote healthier eating', The Lancet. Diabetes & Endocrinology 9.7: 462–470, http://doi.org/10.1016/S2213-8587(21)00078-4

Popkin, B.M. and Ng, S.W. (2022). 'The nutrition transition to a stage of high obesity and noncommunicable disease prevalence dominated by ultra-processed foods is not inevitable', Obesity Reviews 23.1: e13366, http://doi.org/10.1111/obr.13366

Roelen, K.; Devereux, S.; Abdulai, A.-G.; Martorano, B.; Palermo, T. and Ragno, L.P. (2017). How to Make 'Cash Plus' Work: Linking Cash Transfers to Services and Sectors, Innocenti Working Papers 2017/10 (Vol. 2017/10), https://www.un-ilibrary.org/content/papers/25206796/146 (accessed 15 December 2021)

Roelen, K.; Sherer, M. and Himmelstine, C.-L. (2020). 'The role of graduation programming in promoting early childhood development: an overview of the evidence', Journal of the British Academy 8s2: 133–161, http://doi.org/10.5871/jba/008s2.133

Ruel, M.; Leroy, J. and Verhofstadt, E. (2009). 'The impact of conditional cash transfer programmes on child nutrition: A review of evidence using a programme theory framework', The Journal of Development Effectiveness 1: 103–129, http://doi.org/10.1080/19439340902924043

Sherr, L.; Roberts, K.J.; Mebrahtu, H.; Tomlinson, M.; Skeen, S. and Cluver, L.D. (2020). 'The food of life: an evaluation of the impact of cash grant receipt and good parenting on child nutrition outcomes in South Africa and Malawi', Global Health Promotion 27.4: 131–140, http://doi.org/10.1177/1757975920957598

Visser, J.; McLachlan, M.H.; Maayan, N. and Garner, P. (2018) 'Community-based supplementary feeding for food insecure, vulnerable and malnourished populations – an overview of systematic reviews', Cochrane Database of Systematic Reviews .11, http://doi.org/10.1002/14651858.CD010578.pub2

Acronyms

BDHVC	Bono de Desarrollo Humano with a variable component
BCC	Behavior-change communication
BSS	Bono Salud Socia
BDH	Bono de Desarrollo Humano
BDHV	Bono de Desarrollo Humano with Variable Component
CDI	Centros de Desarrollo Infantil
CT	Conditional cash transfer
CCTP	Conditional cash transfer programme (CCTP)
CNH	Creciendo con Nuestros Hijos (CNH)
ECD	Early Child Development (ECD)
FSN	Food security and Nutrition (FSN)
ALC	Latin American and Caribbean
IDS	Institute of Development Studies
IFRI	International Food Policy Research Institute (IFPRI)
MEL	Monitoring, evaluation, and learning
NGO	Non-Governmental Organization
SFP	School Feeding Programme
SPP	Social Protection Programme
WFP	World Food Programme

Annexes

Annex 1: Reference list for extracted articles

ID	Reference
119	Ramirez-Luzuriaga, M.J.; Unar-Munguia, M.; Rodriguez-Ramirez, S.; Rivera, J.A. and Gonzalez de Cosio, T. (2016) 'A Food Transfer Programme without a Formal Education Component Modifies Complementary Feeding Practices in Poor Rural Mexican Communities', JOURNAL OF NUTRITION 146.1: 107–113, http://doi.org/10.3945/jn.115.215962
120	Neufeld, L.M.; Garcia-Guerra, A.; Quezada, A.D.; Theodore, F.; Bonvecchio Arenas, A.; ... Habicht, J.P. (2019) 'A Fortified Food Can Be Replaced by Micronutrient Supplements for Distribution in a Mexican Social Protection Programme Based on Results of a Cluster-Randomized Trial and Costing Analysis', JOURNAL OF NUTRITION 149.12, 1: 2302S-2309S, http://doi.org/10.1093/jn/nxz176
246	Vizuet Vega, N.I.; Shamah Levy, T.; Gaona Pineda, E.B.; Cuevas Nasu, L. and Mendez Gomez-Humaran, I. (2016) 'Adherence to the consumption of food supplements of PROSPERA program, in the decrease of the prevalence of anemia in children under three years old in the state of San Luis Potosi, Mexico', NUTRICION HOSPITALARIA 33.4: 782–789, http://doi.org/10.20960/nh.370
421	Dyngeland, C.; Oldekop, J.A. and Evans, K.L. (2020) 'Assessing multidimensional sustainability: Lessons from Brazil's social protection programmes ', PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA 117.34: 20511–20519, http://doi.org/10.1073/pnas.1920998117
496	Rossi, C.E.; de Fragas, H.P.; Correa, E.N.; das Neves, J. and Guedes de Vasconcelos, F. de A. (2019) 'Association between food, physical activity, and social assistance environments and the body mass index of schoolchildren from different socioeconomic strata', JOURNAL OF PUBLIC HEALTH 41.1: E25–E34, http://doi.org/10.1093/pubmed/fdy086
505	Mendes, M.M.E.; Marçal, G. de M.; Fragoso, M.D.G.M.; Florêncio, T.M. de M.T.; Bueno, N.B. and Clemente, A.P.G. (2021) 'Association between iron deficiency anaemia and complementary feeding in children under 2 years assisted by a Conditional Cash Transfer programme.', Public Health Nutrition 24.13: 4080–4090, http://doi.org/10.1017/S1368980020002542
554	Marcal, G. de M.; Moura e Mendes, M.; Fragoso, M.D.G.M.; Florencio, T.M. de M.T.; Bueno, N.B. and Clemente, A.P.G. (2021) 'Association between the consumption of ultra-processed foods and the practice of breast-feeding in children under 2 years of age who are beneficiaries of the conditional cash transfer programme, Bolsa Familia', PUBLIC HEALTH NUTRITION 24.11: 3313–3321, http://doi.org/10.1017/S136898002000244X
793	Levasseur, P. (2019) 'Can social programmes break the vicious cycle between poverty and obesity? Evidence from urban Mexico', WORLD DEVELOPMENT 113: 143–156, http://doi.org/10.1016/j.worlddev.2018.09.003
994	de Souza, A.A.; Mingoti, S.A.; Paes-Sousa, R. and Heller, L. (2021) 'Combined effects of conditional cash transfer programme and environmental health interventions on diarrhea and malnutrition morbidity in children less than five years of age in Brazil, 2006-2016', PLOS ONE 16.3, http://doi.org/10.1371/journal.pone.0248676
997	de Souza, A. A., Mingoti, S. A., Paes-Sousa, R., & Heller, L. (2021). Combined effects of conditional cash transfer program and environmental health interventions on diarrhea and malnutrition morbidity in children less than five years of age in Brazil, 2006-2016. PLOS ONE, 16(3). https://doi.org/10.1371/journal.pone.0248676
1091	Lopez-Arana, S.; Avendano, M.; Forde, I.; van Lenthe, F.J. and Burdorf, A. (2016) 'Conditional cash transfers and the double burden of malnutrition among children in Colombia: a quasi-experimental study', BRITISH JOURNAL OF NUTRITION 115.10: 1780–1789, http://doi.org/10.1017/S0007114516000714
1092	Barbosa De Lima, A.C.; Brondizio, E.; Nardoto, G.B. and Silva Do Nascimento, A.C. (2020) 'Conditional Cash Transfers in the Amazon: From the Nutrition Transition to Complex Dietary Behavior Change', ECOLOGY OF FOOD AND NUTRITION 59.2: 130–153, http://doi.org/10.1080/03670244.2019.1678032
1361	Morales Ruan, M. del C.; Valenzuela Bravo, D.G.; Jimenez Aguilar, A.; Cuevas Nasu, L.; Gomez Humaran, I.M. and Shamah Levy, T. (2018) 'Dietary diversity in women who live in food insecurity settings in Mexico, beneficiaries of a food support program', NUTRICION HOSPITALARIA 35.2: 408–415, http://doi.org/10.20960/nh.1620
1375	Mendes, M.M.E.; Marçal, G. de M.; Rinaldi, A.E.M.; Bueno, N.B.; Florêncio, T.M. de M.T. and Clemente, A.P.G. (2021) 'Dietary patterns of children aged 6-24 months assisted by the Bolsa Família Program.', Public Health Nutrition : 1–11, http://doi.org/10.1017/S1368980021004110
1455	White, J.S. and Basu, S. (2016) 'Does the benefits schedule of cash assistance programmes affect the purchase of temptation goods? Evidence from Peru.', Journal of Health Economics 46: 70–89, http://doi.org/10.1016/j.jhealeco.2016.01.005
1514	Labrecque, J.A.; Kaufman, J.S.; Balzer, L.B.; Maclehose, R.F.; Strumpf, E.C.; ... Barros, A.J.D. (2018) 'Effect of a conditional cash transfer programme on length-for-age and weight for-age in Brazilian infants at 24 months using doubly-robust, targeted estimation', SOCIAL SCIENCE & MEDICINE 211: 9–15, http://doi.org/10.1016/j.socscimed.2018.05.040
1899	Ventura, H., Gonçalves, B., Diogo, I., Da Cunha, T., Stedefeldt, E., Veridiana, I. I., De, V., & Iii, R. (2015). Family farming products on menus in school feeding: a partnership for promoting healthy eating. Ciência Rural, 45(12), 2267–2273. https://doi.org/10.1590/0103-8478CR20150214
1964	Trivellato, P.T.; Priore, S.E.; Castro Franceschini, S. do C.; Silva Santos, R.H. and Lima Costa, B.A. (2019) 'Food and nutrition (in)security in families of farmers who supply the National School Feeding Program', REVISTA DE NUTRICAO-BRAZILIAN JOURNAL OF NUTRITION 32, http://doi.org/10.1590/1678-98652019e180247
1968	Pacheco, P.M.; de Oliveira Pedroso, M.R.; Goncalves, S.C.; Macedo Cuervo, M.R. and Rossoni, E. (2018) 'Food and nutritional security of families assisted by the Bolsa Familia cash transfer programme in primary health care', MUNDO DA SAUDE 42.2: 459–467, http://doi.org/10.15343/0104-7809.20184202459477
1971	Shamah-Levy, T.; Mendez-Gomez-Humaran, I.; Gaona-Pineda, E.B.; Cuevas-Nasu, L. and Villalpando, S. (2016) 'Food assistance programmes are indirectly associated with anaemia status in children < 5 years old in Mexico', BRITISH JOURNAL OF NUTRITION 116.6: 1095–1102, http://doi.org/10.1017/S0007114516003019

ID	Reference
1973	de Matos Calixto, F.A.; Trivellato, P.T.; Miguel, E. da S. and Priore, S.E. (2021) 'Food availability and food and nutrition (in)security of families providing for the National School Feeding Program', REVISTA DE NUTRICAO-BRAZILIAN JOURNAL OF NUTRITION 34, http://doi.org/10.1590/1678-9865202134e190186
1990	Lucena, P.N.; Bueno, N.B.; Vieira, K.A.; Cabral, M.J.; Grotti Clemente, A.P. and de Menezes Toledo Florencio, T.M. (2020) 'Food insecurity and weight status of socially vulnerable child beneficiaries of a food assistance programme in Maceio, Northeast Brazil', PUBLIC HEALTH NUTRITION 23.4: 721–726, http://doi.org/10.1017/S1368980019003380
2148	Perez-Lu, J. E., Carcamo, C., Nandi, A., & Kaufman, J. S. (2017). Health effects of `Juntos', a conditional cash transfer programme in Peru. MATERNAL AND CHILD NUTRITION, 13(3). https://doi.org/10.1111/mcn.12348
2167	Ford, K.J.; Lourenco, B.H.; Cobayashi, F. and Cardoso, M.A. (2020) 'Health outcomes of the Bolsa Familia programme among Brazilian Amazonian children', REVISTA DE SAUDE PUBLICA 54, http://doi.org/10.11606/s1518-8787.2020054001519
2382	Carrillo-Larco, R.M.; Jaime Miranda, J. and Bernabe-Ortiz, A. (2016) 'Impact of Food Assistance Programmes on Obesity in Mothers and Children: A Prospective Cohort Study in Peru', AMERICAN JOURNAL OF PUBLIC HEALTH 106.7: 1301–1307, http://doi.org/10.2105/AJPH.2016.303191
2383	Palar, K.; Derose, K.P.; Linnemayr, S.; Smith, A.; Farias, H.; Wagner, G. and Martinez, H. (2015) 'Impact of food support on food security and body weight among HIV antiretroviral therapy recipients in Honduras: a pilot intervention trial', AIDS CARE-PSYCHOLOGICAL AND SOCIO-MEDICAL ASPECTS OF AIDS/HIV 27.4: 409–415, http://doi.org/10.1080/09540121.2014.983041
2409	Bortoletto Martins, A.P. and Monteiro, C.A. (2016) 'Impact of the Bolsa Familia programme on food availability of low-income Brazilian families: a quasi experimental study', BMC PUBLIC HEALTH 16, http://doi.org/10.1186/s12889-016-3486-y
2414	Ponce, J. and Ramos-Martin, J. (2017) 'Impact of two policy interventions on dietary diversity in Ecuador', PUBLIC HEALTH NUTRITION 20.8: 1473–1480, http://doi.org/10.1017/S1368980017000052
2636	Silva, E.O.; Amparo-Santos, L. and Soares, M.D. (2019) 'Interactions between dietary habits and identities: redefining public schools and school meals', CADERNOS DE SAUDE PUBLICA 35.11, http://doi.org/10.1590/0102-311X00217918
2991	Falivene, M.A. and Fattore, G.L. (2016) 'Multidimensional approach to iron deficiency anemia in infants younger than two years old in Northeast Argentina. 2004-2005', ARCHIVOS ARGENTINOS DE PEDIATRIA 114.1: 14–22, http://doi.org/10.5546/aap.2016.eng.14
3102	Ballonga Paretas, C.; Lopez Toledo, S.; Echevarria Perez, P.; Vidal Corrons, O.; Canals Sans, J. and Arija Val, V. (2017) 'Nutritional status of the school children in an extremely poor rural area of Ccorca, Peru.INCOS project', ARCHIVOS LATINOAMERICANOS DE NUTRICION 67.1: 23–31
3198	326 Jensen, M.L.; Frongillo, E.A.; Leroy, J.L. and Blake, C.E. (2016) 'Participating in a Food-Assisted Maternal and Child Nutrition and Health Programme in Rural Guatemala Alters Household Dietary Choices', JOURNAL OF NUTRITION 146.8: 1593–1600, http://doi.org/10.3945/jn.116.232157
3263	Lutz, M.; Barraza, R. and Henriquez, C. (2015) 'Phenolic compounds content and antioxidant capacity of meals provided to elementary public schools in Chile during 2011', ARCHIVOS LATINOAMERICANOS DE NUTRICION 65.2: 71–78
3496	Leroy, J.L.; Olney, D.K. and Ruel, M.T. (2019) 'PROCOMIDA, a Food-Assisted Maternal and Child Health and Nutrition Program, Contributes to Postpartum Weight Retention in Guatemala: A Cluster-Randomized Controlled Intervention Trial', JOURNAL OF NUTRITION 149.12: 2219–2227, http://doi.org/10.1093/jn/nxz175
3808	Beintema, J.J.S.; Gallego-Castillo, S.; Londono-Hernandez, L.F.; Restrepo-Manjarres, J. and Talsma, E.F. (2018) 'Scaling-up biofortified beans high in iron and zinc through the school-feeding program: A sensory acceptance study with schoolchildren from two departments in southwest Colombia', FOOD SCIENCE & NUTRITION 6.4: 1138–1145, http://doi.org/10.1002/fsn3.632
3935	Théodore, F.L.; Bonvecchio Arenas, A.; García-Guerra, A.; García, I.B.; Alvarado, R.; ... Pelto, G.H. (2019) 'Sociocultural Influences on Poor Nutrition and Programme Utilization of Mexico's Conditional Cash Transfer Program.', The Journal of Nutrition 149.Suppl 1: 2290S-2301S, http://doi.org/10.1093/jn/nxz181
4019	Moncayo, A.L.; Granizo, G.; Grijalva, M.J. and Rasella, D. (2019) 'Strong effect of Ecuador's conditional cash transfer programme on childhood mortality from poverty-related diseases: a nationwide analysis', BMC PUBLIC HEALTH 19.1, http://doi.org/10.1186/s12889-019-7457-y
4113	Ramos Rodriguez, R.M. and Hernandez Gonzalez, M.G. (2017) 'Tensions and contradictions in government interventions for the promotion of breastfeeding', SALUD COLECTIVA 13.4: 677–692, http://doi.org/10.18294/sc.2017.1357
4124	Boklis-Berer, M.; Rauber, F.; Azeredo, C.M.; Levy, R.B. and Louzada, M.L. da C. (2021) 'The adherence to school meals is associated with a lower occurrence of obesity among Brazilian adolescents', PREVENTIVE MEDICINE 150, http://doi.org/10.1016/j.ypmed.2021.106709
4170	Garcia, L. (2017) 'The Consumption of Household Goods, Bargaining Power and their Relationship with a Conditional Cash Transfer Programme in Peru', JOURNAL OF INTERNATIONAL DEVELOPMENT 29.4: 500–519, http://doi.org/10.1002/jid.3272
4208	Bauchet, J.; Undurraga, E.; Zycherman, A.; Behrman, J.; Leonard, W. and Godoy, R. (2021) 'The effect of gender targeting of food transfers on child nutritional status: experimental evidence from the Bolivian amazon', JOURNAL OF DEVELOPMENT EFFECTIVENESS 13.3: 276–291, http://doi.org/10.1080/19439342.2021.1924833
4267	Lopez-Arana, S.; Avendano, M.; van Lenthe, F.J. and Burdorf, A. (2016) 'The impact of a conditional cash transfer programme on determinants of child health: evidence from Colombia', PUBLIC HEALTH NUTRITION 19.14: 2629–2642, http://doi.org/10.1017/S1368980016000240
4277	Kronebusch, N. and Damon, A. (2019) 'The impact of conditional cash transfers on nutrition outcomes: Experimental evidence from Mexico', ECONOMICS & HUMAN BIOLOGY 33: 169–180, http://doi.org/10.1016/j.ehb.2019.01.008
4517	Bonvecchio Arenas, A.; Gonzalez, W.; Theodore, F.L.; Lilia Lozada-Tequeanes, A.; Garcia-Guerra, A.; ... Neufeld, L.M. (2019) 'Translating Evidence-Based Programme Recommendations into Action: The Design, Testing, and Scaling Up of the Behavior Change Strategy EsIAN in Mexico', JOURNAL OF NUTRITION 149.12, 1: 2310S-2322S, http://doi.org/10.1093/jn/nxz229
4532	da Silva Junior, A.E.; Macena, M. de L.; Lessa Vasconcelos, L.G.; Almeida, N.B.; Silva Praxedes, D.R.; ... Grotti Clemente, A.P. (2021) 'Trend of the nutritional status of pregnant adolescent beneficiaries of the Brazilian Bolsa Familia conditional cash transfer programme in the 2008-2018 period', CIENCIA & SAUDE COLETIVA 26.7: 2613–2624, http://doi.org/10.1590/1413-81232021267.08172021

Annex 2: Finalised search syntax and search tables

PICOS	Details	Syntax building
Population	All populations	
Intervention/ Exposure	General social protection & Cash & cash + Food transfers & school meals Youth programmes Agriculture interventions Double duty	"Social protection" OR "social safety net" OR "social assistance" OR "social welfare" OR "social grant" OR "graduation program*" OR "Financial transfer" OR "cash transfer" OR "cash +" OR "cash plus" OR "asset transfers" OR "cash assistance" OR "economic incentive" OR "food basket" OR "food transfer" OR "food donation" OR "food ration" OR "food voucher" OR "food aid" OR "food assistance" OR "food distribution" OR "food pantry" OR "community kitchen" OR "school feeding" OR "school meals" "free breakfast" OR "free lunch" OR "take home rations" OR "school snack" OR "youth employment" OR "youth empowerment" OR "insurance" OR "public works" OR "agricultural subsidies" OR "double duty"
Comparison	NA	
Outcomes	Undernutrition & micronutrient deficiency IYCF Diet & consumption Obesity & NCDs	Diet, food, and nutrition [MeSH Terms] OR undernutrition OR malnutrition OR anthropometry OR anthropometrics OR stunting OR wasting OR WAZ OR "weight for height" OR WHZ OR "height for age z-score" OR "weight for age" OR HAZ OR "annual growth" OR "growth failure" OR "growth retardation" OR "growth disorder" OR "undernourish*" OR "short stature" OR "chronic hunger" OR "low birth weight" OR LBW OR Anaemia OR anemic OR anemic OR deficiency OR deficient OR "hidden hunger" OR folate OR iron OR breastfeeding OR "infant and young child feeding" OR "care practice*" OR IYCF OR diet OR "food consumption" OR "meal frequency" OR "food intake" OR "dietary diversity" OR "body mass index" OR "BMI" OR overweight OR obese OR obesity OR "double burden" OR "double duty" OR "triple burden" OR "Non-communicable disease*" OR NCD OR hypertension OR "cardiovascular disease" OR diabetes OR "high blood pressure" OR "24-hour recall" OR "dietary quality" OR "food group consumption" OR "micronutrient intake" OR "vitamin A intake" OR "nutrient intakes"
Setting	LMIC	Afghanistan OR Afghan OR Albania* OR Algeria* OR "American Samoa*" OR Angola* OR Armenia* OR Azerbaijan* OR Bangladesh* OR Belarus OR Belorussian OR Beliz* OR Benin* OR Bhutan* OR Bolivia* OR "Bosnia and Herzegovina" OR Botswan* OR Brazil* OR Bulgaria* OR "Burkina Faso" OR Burkinabe OR Burund* OR "Cabo Verde" OR Cambodia* OR Cameroon* OR "Cape Verde" OR "Cape Verdean" OR "Central African Republic" OR Chad* OR China OR Chinese OR Colombia* OR Comoros OR Comorian OR "Democratic Republic of Congo" OR "Republic of Congo" OR Congo OR Congolese OR "Costa Rica" OR "Costa Rican" OR "Côte d'Ivoire" OR "Republic of Côte d'Ivoire" OR "Ivory Coast" OR Ivorian OR Djibouti* OR Dominica* OR "Dominican Republic" OR Ecuador* OR Egypt* OR "Arab Republic of Egypt" OR "El Salvador" OR Salvadorian OR "Equatorial Guinea" OR Guinean OR Eritrea* OR Ethiopia* OR Fiji* OR Gabon* OR Gambia* OR Georgia* OR Ghana* OR Grenad* OR Guatemala* OR Guinea OR "Guinea-Bissau" OR Guyan* OR Haiti* OR Hondura* OR India* OR Indonesia* OR Iran* OR "Islamic Republic of Iran" OR Iraq* OR Jamaica* OR Jordan* OR Kazakh* OR Kenya OR Kenyan OR Kiribati OR Korea* OR Kosov* OR "Kyrgyz Republic" OR Kyrgyzstan* OR Lao OR Laos OR Laotians OR Lebanon OR Lebanese OR Lesotho OR Liberia* OR Libya* OR Macedonia* OR "republic of Macedonia" OR Madagasca* OR Malawi* OR Malaysia* OR Maldives OR Maldivian OR Mali OR Malian OR "Marshall Islands" OR Mauritania* OR Mauritius OR Mauritian OR Mexic* OR Micronesia* OR Moldov* OR Mongolia* OR Montenegr* OR Morocc* OR Mozambique OR Mozambican OR Myanmar OR Namibia* OR Nauru* OR Nepal* OR Nicaragua* OR Niger* OR Nigeria* OR Pakistan* OR "Papua New Guinea" OR Paraguay* OR Peru* OR Philippine* OR Romania* OR "Russian Federation" OR Rwanda* OR Samoa* OR "Sao Tome and Principe" OR Sao Tomean OR Senegal* OR Serbia* OR "Sierra Leone" OR "Solomon Islands" OR Somali* OR "South Africa" OR "South African" OR "South Sudan*" OR "Sri Lanka" OR "Sri Lankan "OR "Saint Lucia" OR "Saint Vincent and the Grenadines" OR Sudan* OR Suriname* OR Swaziland Or Swazi OR "Syrian Arab Republic" Or Syria* OR Tajikistan OR Tajik OR Tanzania* OR Thailand OR Thai OR "Timor-Leste" OR Togo* OR Tonga* OR Tunisia* OR Turkey OR Turkish OR Turkmenistan OR Tuvalu OR Uganda* OR Ukrain* OR Uzbekistan OR Uzbek OR Vanuat* OR Venezuela* OR Vietnam* OR "West Bank and Gaza" OR Yemen* OR "Republic of Yemen" OR Zambia* OR Zimbabwe* OR "developing country" OR "developing countries" OR "developing world" OR "middle income country" OR "middle income countries" OR "low income country" OR "low income countries" OR "low and middle income country" OR "low and middle income countries" OR lmic OR lmics OR "third world"
Setting	Latin American & Caribbean	"Anguilla" OR "Antigua and Barbuda" OR "Argentina" OR "Aruba" OR "Bahamas" OR "Barbados" OR "Bolivia" OR "Belice" OR "Belize" OR "Brasil" OR "Brazil" OR "British Virgin Islands" OR "Cayman Islands" OR "Chile" OR "Colombia" OR "Costa Rica" OR "Cuba" OR "Dominica" OR "Dominican Republic" OR "Republica Dominicana" OR "Ecuador" OR "El Salvador" OR "French Guiana" OR "Grenada" OR "Guadalupe" OR "Guatemala" OR "Guiana" OR "Guyana" OR "Haiti" OR "Honduras" OR "Leeward Islands" OR "Jamaica" OR "Martinique" OR "Mexico" OR "Montserrat" OR "Netherlands Antilles" OR "Nicaragua" OR "Panama" OR "Paraguay" OR "Peru" OR "Puerto Rico" OR "Saint Kitts and Nevis" OR "Saint Lucia" OR "Saint Vincent and the Grenadines" OR "Suriname" OR "Surinam" OR "Trinidad and Tobago" OR "Turks and Caicos Islands" OR "Uruguay" OR "Venezuela" OR "Virgin Islands of the United States" OR "Windward Islands" OR "Caribbean" OR "Central America" OR "Latin America" OR "South America" OR "West Indies"
Study type	Any intervention type, including qual literature reporting on a given intervention	intervention OR programme OR policy OR programme OR trial OR project OR qualitative
Language	English, Spanish Portuguese	+ Filter English, Spanish, Portuguese
Timeframe	2015 onwards	+ Filter 2015 onwards

Annex 3: Extraction and coding template

Nodes	Child nodes	Coding Question(s)	Codes, examples	Analysis Question(s)
General Study Information				
ID		Assign ID identifier (initial+number)	Free text Initial(s) of search type + number e.g. Database search: D1, D2, D3, D4, etc. Grey literature search: G1, G2, G3, G4, etc. Expert consultation: EC1, EC2, EC3, etc. Reference search: R1, R2, R3, R4, etc. [The ID: initial+number will be used to name full text documents on Teams/Dropbox so that they are easily retrievable].	Technical
Author			Free text	Descriptive attributes
Year of publication			Free text	Descriptive attributes
Title			Free text	Descriptive attributes
Type of document			Free text	Descriptive attributes
Domain		What is the domain in which the document is produced?	Code: • Government policy • Donor-led study • Non-donor NGO • Academic research • Civil society/community-led social accountability • Other (specify)	Descriptive attributes
Wider Intervention Characteristics				
Social protection sector		What is/are the sector(s) in which the social protection intervention is designed/ implemented?	Free Text Code: • Social Protection only (meant as social assistance/cash transfers incl. pensions etc.) • Nutrition • Agriculture • Food security • Food systems • Water, Sanitation, and Hygiene (WASH) • Health • NCD prevention • Early Childhood Development/Education; • Development (e.g. economic development, rural development, etc.) • Environment, Climate Change, and/or Resources management • and other sectors and cross-sectional as relevant (e.g. Family planning, Livelihoods, etc.) • Gender (e.g. prevention of IPV, early marriage, early pregnancy) • Poverty Alleviation • Other (specify)	Descriptive attributes
Geographical area		What is the geographical area covered by the intervention	Code: • Individual country • LAC region • LMICs • Comparative studies which include countries of interest • Comparative studies which exclude countries of interest	Descriptive attributes
SP Programme(s) name (and acronym)				

Nodes	Child nodes	Coding Question(s)	Codes, examples	Analysis Question(s)
Social protection type		What is the type of social protection?	Code > type of social protection intervention Free text (examples) Social assistance: • unconditional cash transfer • conditional cash transfer • Cash + (e.g. food, BCC) • Food basket • In-kind transfers • Asset transfer • Vouchers • School feeding • Graduation programme • Public works • Cash and food for training • Youth programme with cash, food or asset transfer • Livelihood programme with cash, food or asset transfer • Women's economic empowerment programme with cash, food or asset transfer • Social insurance Others: • Agriculture input subsidies • Insurance	What are the elements of social protection that should feed into our conceptual/ operational framework?
Transfer modality		What is the transfer modality of the social protection intervention?	The modality by which social protection is delivered (individual component or various combinations – incl. comparisons or treatment/control differences in transfer modality within an individual study) Code: • Cash only • Food only • Food+Cash • Cash+SBCC • Food+SBCC • Cash + Food + SBCC • Cash + Food + Assets + Market skills • Other (specify)	
Conditionality status		Is (part of) the intervention attached to conditionalities	Code: • Conditional • Unconditional • Partially conditional (specify for which components if relevant)	
Type of conditionality		What are the types of conditionality attached to the receipt of the social protection programme components?	Code: e.g. cash transfer component > attached conditionalities: • School attendance of HH children, • Health centre attendance of WRA/PLW/child/adolescent, • Screening for NCDs, • Quotas (e.g. %age of fruit/vegetables/meat from local farmers or farmers who are the parents of pupils attending local schools) • Gender-sensitive quotas • Other (specify)	
Targeted population(s) of whole intervention		What is/are the targeted population(s)?	Code: Specify based on type of targeting strategy (list all here) e.g. • Age-based • Equity-sensitive groups (e.g. list targeting by gender, socioeconomic status, disease burden/disability, etc.) • Profession/livelihood (e.g. farmers) • Other (specify)	**What are the pathways and linking nodes between social protection and nutrition (and nutrition-related health) that should feed into our conceptual/ operational framework?**

Nodes	Child nodes	Coding Question(s)	Codes, examples	Analysis Question(s)
Delivery platform(s)		What are the delivery platforms through which social protection programme components are delivered?	Free Text Platforms through which social protection intervention components are delivered (incl. cash, food, assets, social and behaviour change communication, IYCF, pre-/intra-/post-partum counselling components, etc.) Code: • Facilities/premises (e.g. bank, school, local health facilities) • Tech/communication devices (e.g. phones) • Other platforms relevant to the delivery of specific components (e.g. mobile bank vehicles) • Home visits • One-to-one / group counselling • Community outreach • Other premises outreach • Market-based • Communication & media platforms • Community leaders • Feeding & dietary guidelines • Local community cooperative systems • Other livelihood-related bodies • Capacity building platforms • Political platforms • Research platforms • Other (specify)	
Coverage		What is the planned/achieved coverage of the intervention (and/or intervention component which is the focus of this study)?	Drop Down Box Code: • National • Sub-national • Cross-country/Regional • Pilot (specify coverage) • Scaled up (specify extended coverage – can be gradual with extension subjected to different timeframes)	
Study Specific Characteristics				
Policy cycle stage		Which stage of the policy or programme cycle is the focus of this study?	Drop Down Box Code: • Formative research • Pilot • Implementation • Process monitoring • Impact evaluation • Scaling-up • Combination of the above • Other (specify)	Descriptive attributes
Setting		What setting(s) does the social protection intervention focus on?	Code: • Urban • Peri-urban • Rural • Specific types of sub-settings/facilities across settings (e.g. neighbourhood defined by specific characteristics, etc.) • National • Different combinations for different components • Displaced/ temporary • Other (specify)	Descriptive attributes

Nodes	Child nodes	Coding Question(s)	Codes, examples	Analysis Question(s)
Study design		What is the study design?	Code: • Quantitative (specify) • Qualitative (specify) • Mixed methods • Experimental • Quasi experimental • Other (specify)	Descriptive attributes
Sample (n)		What is the sampling number?	Code: • no. of villages/ households/ individuals or farms/farmers, schools/pupils, health centres/health workers/supervisors, etc. • (e.g. number of key stakeholder interviews) • No. in control vs. treatment groups	Descriptive attributes
Sampling Method		What is the sampling strategy?	Code where relevant depending on study design: • Simple Random Sampling • Systematic sampling • Stratified sampling • Clustered Sampling • Convenience Sampling • Quota Sampling • Purposive Sampling • Snowball • Other	Descriptive attributes
Lifecycle stage(s)		What are the lifecycle stages targeted by the intervention?	Code: • Children (inlc. newborn, infant, U2, U5, pre-school-aged, school-aged) • Adolescents (incl. disaggregation) • WRA (specify if 15-49 or free depending on context) • Pre-/Intra-/Post-partum • PLW • Adults (incl. disaggregation) • Elderly (incl. diaggregation) • Any other age-based grouping relevant to context (e.g in relation to social practices that span across standard age groupings)	
Nutrition and DR Outcomes			Free Text as appears in paper EG. • Malnutrition (general/all types) • Undernutrition • Moderate Acute Malnutrition (MAM) • Severe Acute Malnutrition (SAM) • Low birth weight • Underweight • Macronutrient deficiencies • Protein-Energy deficiency • Micronutrient deficiencies (incl. list of specific vitamins and minerals) • Other micronutrient imbalances (incl. excessive intake of sodium, etc. – make a note of iron overload if we come across it • Overweight • Obesity • Other metabolic risk factors: raised blood pressure, increased blood glucose, elevated blood lipids • Diabetes • Food choice • Food quality	**What are the nutrition-relevant determinants and outcomes that should inform our conceptual/ operational framework?**

Nodes	Child nodes	Coding Question(s)	Codes, examples	Analysis Question(s)
Forms of malnutrition (taxonomy) will be added in next round		What are the forms of malnutrition targeted by the intervention?	Code: Will add in next round of analysis • Undernutrition • Overweight/ obesity • DR-NCD • Diet quality/ consumption	
Measured impact on nutrition outcomes		What are the measured impacts on nutrition outcomes?	Free text (taxonomy) will be added in next round	
Drivers			Free Text	
Stated limitations		What are the acknowledged limitations of the design/intervention?	Free text Code for information that can help gather detail on impact pathways/ strength of evidence	**What are the limitations (strength/weakness considerations) of impact pathways found in the literature?**
Stated assumptions		What are the acknowledged assumptions made with regards to expected ToC/ impact pathways of the intervention/ study design?	Free text Code for information that can help gather detail on impact pathways/ strength of evidence	**What are the assumptions behind expected/measured impact pathways identified in the literature?**
Study Summary Conclusions			Free Text	
Additional Components				
Impact pathways described		Does the study include a Theory of Change / Impact Pathways section? What are its main components?	Code: • ToC/Impact pathway specified (yes/no) – transfer image to word doc – main structure components if in list/paragraph-heading form (incl. dependent/independent variable, mediator & moderator variables if relevant)	Descriptive attributes
Equity		What are the inequities taken into account by this social protection intervention?	• Code: (List dimensions of (in)equity taken into account by social protection intervention) • Place of residence (regular/irregular/temporary)Nationality • Ethnicity • Culture • Religion • Language (incl. minorities within country) • Age • Gender/sex • Sexual orientation • Socioeconomic status • Occupation/mixed livelihoods (incl. formal/informal and temporary migration) • Education/literacy • Disease burden/Disability • Social capital (incl. HH and community dynamics based on age, gender, profession, social role, etc.) • Political representation/participation • Other personal/relational characteristics associated with discrimination (i.e. other instances where a person may be permanently or temporarily at a disadvantage) • Any other relevant overlap of dimensions above (specify if highly context-specific)	

Nodes	Child nodes	Coding Question(s)	Codes, examples	Analysis Question(s)
Timeline		What is the timeframe used?	Code: [Depending on the study, we may find information related to multiple timeframes -examples below] • Individual component focus of study • Programme • Sub-programme (same timeframe as main social protection framework) • Added programme/sub-programme (different timeframe from main social protection framework) • Pilot • Phased-in implementation • Gradual scale up Specify as relevant	**What timeframe (short-/medium-/ long-term impact pathways) should be applied to different sections of our conceptual/ operational framework?**
Additional contextual information			Free text (add if relevant)	Contextual

Photo Credits

Cover page	WFP/Rein Skullerud	Colombia
Page 4	WFP/Giulio d'Adamo	Guatemala
Page 6	WFP/Esteban Barrera	Ecuador
Page 8	WFP/Henry Barreto	Peru
Page 10	WFP	Colombia
Page 14	WFP/Jose Luis Zapata	Peru
Page 16	WFP/Marianela Gonzalez	Venezuela
Page 23	WFP/Carlos Alonzo	Guatemala
Page 24	WFP/Giulio d'Adamo	Guatemala
Page 26	WFP/Jose Luis Zapata	Peru
Page 33	WFP/Jose Luis Zapata	Peru
Page 36	WFP/Elias Miranda	Venezuela
Page 40	WFP/Giulio d'Adamo	Guatemala

For further information, do get in touch with us at: **socialprotection@wfp.org**

To know more about WFP's work in social protection, follow this link: **www.wfp.org/social-protection**

institute of development studies

WFP World Food Programme

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE
IFPRI