

UNCONDITIONAL CVA 'PLUS' SBC FOR NUTRITION OUTCOMES



LITERATURE REVIEW



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LITERATURE REVIEW



Table of Contents

Authors & Contributors	1
Published by	1
List of Tables & Figures	2
Acronyms	3
Introduction	4
Methodology	4
Search Results	7
Publication and Timeframe	7
Location and Duration	7
Study Population	7
Target Beneficiaries	7
Trial Arms	8
Nutrition Outcomes Measured	8
Conclusions	10
Summary of Key Findings	10
Recommendations	10
References	11
Appendix I: General Search Strategy: Cash + SBCC for Nutrition Outcomes	13
Appendix II: Study Descriptions and Detailed Findings per Study	13
List of Tables & Figures	
Table 1 Article Inclusion & Exclusion Criteria	
Table 2 Overall Intervention Effects on Key Nutrition Outcomes Indicators*	8
Figure 1 PRISMA Diagram of Search & Screening Results	6

LITERATURE REVIEW



Acronyms

BCC Behavior Change Communication

BISP Benazir Income Support Programme

CCT Conditional Cash Transfers

CHA Community Health Assistants

CHW Community Health Workers

CNW Community Nutrition Workers

CVA Cash and Voucher Assistance

CU5 Children-Under-5

HAD Height-for-Age Deviation

HAZ Height-for-Age Z-Score

LAZ Length-for-Age Z-Score

LHZ Length-for-Height Z-Score

LHW lady Health Workers

LNS Lipid-Based Nutrition Supplement

MUAC Mid-Upper Arm Circumference

PLW Pregnant and Lactating Women

SBCC Social and Behavior Change Communication

SNF Specialized Nutritious Food

UCT Unconditional Cash Transfers

WASH Water, Sanitation, and Hygiene

WAZ Weight-for-Age Z-Score

WHZ Weight-for-Height Z-Score

LITERATURE REVIEW



Introduction

Background on Cash + SBC for Nutrition

Over the years, cash and voucher assistance (CVA) has gained attention in social protection schemes to improve child nutrition outcomes. While much of the existing evidence comes from conditional cash transfers, recent evidence demonstrates a push for moving towards the use of unconditional CVA. Evidence shows cash transfers can improve child nutrition outcomes in development settings, such as improving child wasting and stunting outcomes. Nutrition-sensitive cash assistance is proposed to impact child nutrition outcome via multiple pathways, for example, by first directly improving income and women's empowerment, which in turn may result in better household food access, increased access to health and sanitation facilities, and improved childcare practices.

Given the complexity of malnutrition, there is recognition that "cash plus" interventions, such as incorporating nutrition promotion and education activities into cash assistance programs for nutrition outcomes, are needed in all settings to better address the numerous and wide-ranging causes of malnutrition.²⁻³ Evidence has shown a greater impact of cash assistance on nutrition outcomes when paired with nutrition-specific interventions, such as social and behavior change communication (SBC) approaches.^{1,4} Therefore, there has been a call to combine cash assistance with tailored SBC interventions ("Cash + SBC") in order to equip beneficiaries with relevant nutrition knowledge and skills to utilize cash assistance most effectively.^{1,4} And while there is a recognition of the need for cash and SBC combined approaches, evidence on the most effective SBC modalities and messages is lacking.^{1,4}

Purpose of the Literature Review

The purpose of this literature review is to gather, summarize, and assess the current evidence around unconditional Cash + Nutrition-specific SBCC interventions for nutrition outcomes among children under 5 to: 1) develop key SBCC activity recommendations, 2) identify areas of further research, and 3) inform Save the Children's approach to Cash + Nutrition SBCC interventions.

Methodology

Eligibility Criteria

A literature review was conducted around unconditional cash in conjunction with SBC interventions to assess and compare the effectiveness of specific types of SBC activities in the prevention, treatment, and recovery of malnutrition among children-under-5 in different development settings. The article inclusion and exclusion criteria are seen in *Table 1* on the following page. The study population was children under five, and low- and middle-income countries defined the study setting/context. Original published research that reported quantitative nutrition outcomes of children under 5 before and after receipt of unconditional cash and that contained an appropriate comparison group were eligible for inclusion. Only research that was conducted in the last 15 years (since 2009) and that had at least 300 participants was included.

Search Strategy

The eligibility criteria in *Table 1* on the following page informed the search strategy for the literature review. **Appendix I** describes the search strategy in detail, which focused on four domains imperative to the objective of the literature review: children under 5, cash assistance, social and behavior change, and nutrition outcomes. Search terms were built around these concepts, utilizing Boolean operators, and including relevant Mesh terms as appropriate. The following eight databases were searched: PubMed, Scopus, Web of Science, 3ie, ScienceDirect, Embase, Global Health Ovid, and CENTRAL. Searches took place January 15-19, 2024. References from relevant articles were also manually searched, and eligible articles were added to the search results.

LITERATURE REVIEW



Table 1 Article Inclusion & Exclusion Criteria

	Inclusion Criteria	Exclusion Criteria
Type of Article	Any original research published in an academic journal or organizational report in English (peer-reviewed and non-peer-reviewed)	Any reviews, opinion pieces, policy briefs, or other types of articles that are not original research studies. Articles not available in English.
Type of Research	Any original experimental or quasi-experimental trial that includes either a cash-only comparison group or cash + SBCC group used as a control (comparing different types of SBCC activities) and directly measures nutrition outcomes and reports quantitative data and/or mixed methods on impact of intervention on outcomes	Qualitative-only studies that do not directly measure and report nutrition outcomes.
Study Population	Must measure nutrition outcomes among children under 5 (0-59 months of age)	Does not directly measure nutrition outcomes among children-under-5 or measures nutrition outcomes among children-under-5, but only reports aggregate outcomes of children of a broader age range, prohibiting examining the effect of the intervention on just the children-under-5 age group.
Intervention	At least one of the interventions being studied must be a cash + SBC for nutrition intervention. The cash and voucher assistance (CVA) should involve transfer of cash directly at the household- or individual-level aimed at improving nutrition outcomes and some type of SBCC intervention directly to participants. The cash assistance should be <i>unconditional</i> , and the money should be able to be used however the participant chooses. Examples of CVA include prepaid cards, electronic cash transfers, bank deposits, etc. (any modality acceptable). ⁵ Examples of SBC approaches include counselling, support groups, one-off sensitization, cooking demonstrations, and media campaigns (any modality). See the World Food Programme's Guidance Manual on SBC for more details. ⁶	Any studies that are only looking at cash or cash plus some other non-SBCC intervention (for example, cash + food transfers) Studies where the cash plus program requires participant buy-in or contributions, where the cash is expected to be repaid at a later time, or where use of the cash is restricted to certain types of purchases (ex. requiring participants to use the cash for food)
Outcomes	Directly measures and reports quantitative nutritional outcomes (weight-for-height z-score (WHZ), weight-forage z-score (WAZ), height-forage z-score (HAZ), mid-upper arm circumference (MUAC), body mass index (BMI), oedema, wasting, stunting, acute malnutrition, protein energy malnutrition, marasmus, kwashiorkor, underweight, etc.) Outcomes must be measured both pre- and post-intervention to measure the intervention's effect.	Only measures outcomes at either baseline or endline Studying a cash + SBC intervention, but only looking at other non-nutritional outcomes (ex. cognitive development outcomes, water, sanitation, and hygiene (WASH) outcomes, etc.)
Location	World Bank definition for low- and middle-income countries ⁷	Studies performed in upper-middle and high-income countries, such as the United States, Canada, Australia, etc.
Sample Size	Includes at least 300 children under 5	Studies with less than 300 children under 5
Time	Research performed in the past 15 years	Research performed longer than 15 years ago

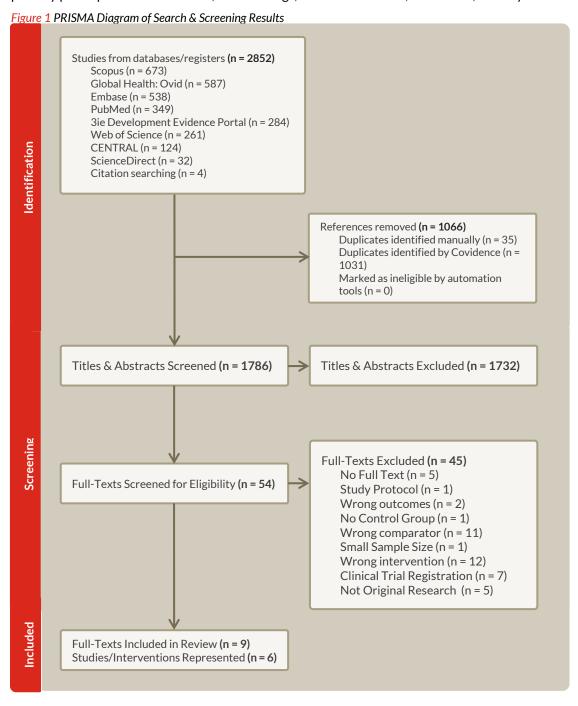
LITERATURE REVIEW



Data Review and Extraction

Covidence software was used to collate all search results and facilitate the title & abstract and full-text screening process. *Figure 1* shows the PRISMA diagram of search and screening results. The literature search produced 2852 articles to be screened, of which 1066 were duplicates. Of the 1786 remaining articles, 54 passed title & abstract screening, and after the full-text screening based on the inclusion and exclusion criteria in *Table 1* only nine (9) articles were retained for final inclusion.

The following information was extracted from these 9 articles using Microsoft Excel: title of paper, author(s), year of study, journal/location of publication, type of study, location of study, context, study duration, age of children, total child sample size, child sample size per arm, trial arms, CVA amount, CVA recipient, CVA modality, CVA transfer duration, CVA transfer frequency, SBC activity, SBC duration, SBC frequency, nutritional outcome(s) measured, nutritional outcome indicators, primary participant characteristics, main findings, recommendations, limitations, and any additional relevant information.



LITERATURE REVIEW



Search Results

Publication and Timeframe

Upon data extraction, it was realized that three of the articles were describing results from the same program/intervention as three of the other articles.^{8-9,11-12,14-15} However, in each case, both papers contributed additional information and context. Therefore, the final review includes 9 articles that reflect the results of 6 unique programs and interventions. **Of the final included papers, 4 are peer-reviewed articles published in academic journals** (*American Journal of Clinical Nutrition, Journal of Tropical Pediatrics, Journal of Development Economics*, and Oxford Bulletin of Economics and Statistics), **3 are program evaluation reports** (World Food Programme, e-PACT, and Innovations for Poverty Action/Save the Children), **1 is a working paper** from the National Bureau of Economic Research, **and 1 is a discussion paper** from the International Food Policy Research Institute (IFPRI).⁸⁻¹⁶ All papers were published from 2019-2022, and all research took place from 2012-2021.⁸⁻¹⁶

Appendix II presents an overview of each study and key findings and conclusions of interest to this literature review.⁸⁻¹⁶

Location and Duration

All of the studies were randomized control trials (RCTs) and were conducted in the following countries: Bangladesh, Niger, Pakistan, Liberia, Myanmar, and Nigeria. 8-16 The majority of studies took place in rural or sub-rural settings in poor areas of the country. 8-16 RCT durations ranged from 12-33 months, with one lasting 12 months, one lasting 18 months, two lasting 24 months, one lasting 30 months, and one lasting 33 months. 8-16 The intervention durations varied, similarly, and are discussed in detail in their respective sections.

Study Population

As per the inclusion criteria, all studies included children-under-5 as study subjects. 8-16 However, the studies varied regarding at what age children were enrolled in the study and at what age anthropometric and nutritional outcomes were assessed. 8-16 The study in Niger, for example, included all eligible children aged 6-59 months at baseline and again considered all children aged 6-59 months at endline. 10 On the other hand, the study in Pakistan enrolled children at 6 months of age and followed them for 18 months, measuring nutritional outcomes only at 24 months of age, whereas the study in Liberia enrolled children aged 6-23 months and followed-up after 12 months of the intervention. 11-13 Conversely, the study in Bangladesh enrolled children anywhere from 0-24 months at baseline, and their endline sample included children aged 0-60 months old (1). 8-9 The Nigeria study included both children 0-59 months old at baseline as well as pregnant women, and assessed outcomes among the same women and children, as well as children born to enrolled women between baseline and midline, at midline and endline data collection. 16 This sample is similar to the Myanmar study that included pregnant women and considered children born during the course of the study, having data on children aged 0-5 years at the end of the 30 months of the study; however, most of the anthropometric data from the study in Myanmar focuses on children aged 6-29 months old. 14-15

Target Beneficiaries

Overall, four of the studies directly targeted mothers or pregnant women as beneficiaries (Bangladesh, Niger, Nigeria, Myanmar), whereas the other two more broadly defined caregivers as the beneficiaries (Pakistan, Liberia).⁸⁻¹⁶ Despite targeting mothers and pregnant women, the study in Myanmar emphasized that the majority of the beneficiaries were children's grandmothers or other household members and not the biological mothers of the children.¹⁴⁻¹⁵

^{1.} ¹This is the age group terminology used in the report. However, based on outcomes assessed, it is assumed that these are cut points representing children <24 months and children <60 months, respectively.

LITERATURE REVIEW



Trial Arms

In regard to the interventions and trial arms of interest to this literature review, five out of six studies included cash only and cash + SBCC trial arms. Only one study (from Nigeria) contained trial arms comparing intensity levels of SBCC components, including a cash + low-intensity SBCC arm, a cash + high-intensity SBCC arm, and a control arm that received no intervention (low- versus high-intensity SBCC components are detailed in Table 3). However, the authors ended up needing to pool the results from the low- and high-intensity SBCC communities, as crossover and contamination were apparent, and the two levels of SBCC were implemented more alike than intended. Therefore, while the authors include some separate analyses of the low- versus high-SBCC arms in the annex of their report, they were unable to thoroughly examine and analyze the additional effect of the high-intensity SBCC activities as originally planned. All six studies contained a no-intervention control arm, and some of the studies contained additional arms, also considering food transfers and SNF and LNS supplementation. For the purposes of this literature review, only the cash, cash + SBCC, and no intervention control arms are considered.

Nutrition Outcomes Measured

The majority of studies (5/6) assessed stunting, wasting, and underweight as nutrition outcomes, and most of the studies (5/6) employed anthropometric measures with Z-scores, including weight-for-height (WHZ), weight-for-age (WAZ), and height/length-for-age (HAZ/LAZ) Z-scores in order to assess these nutrition outcomes. 8-12, 14-16 The study in Bangladesh also considered height-for-age deviation (HAD), and, while half of the studies reported measuring mid-upper arm circumference (MUAC), of note is that the study in Liberia ended up relying solely on MUAC measurements as an indicator of nutrition status after not being able to obtain reliable height and weight measurements in the field. 8-9, 13 Summaries of the overall impacts on key nutrition outcomes are depicted in *Table 2*. As different analyses and ways of presenting results were employed in different studies, **Appendix II** should be referred to for further details on the impact of each intervention on nutrition outcomes within a given study.

Table 2 Overall Intervention Effects on Key Nutrition Outcomes Indicators*

Study Nutrition Outcome					
Location	Trial Arm	Wasting (WHZ)	Stunting (HAZ)	Underweight (WAZ)	Malnutrition (MUAC)
Bangladesh	Cash + nutrition BCC				
	Cash Only				
Niger	Cash + BCC				
	Cash Only				
Pakistan	Cash + SBCC				
	Cash Only				
Liberia	Cash + Nutrition Education				
	Cash Only				
Myanmar	Cash + SBCC				
	Cash Only				
Nigeria	Cash + High-Intensity SBCC				
	Cash + Low-Intensity SBCC				

^{*}Teal shading indicates a positive impact on the nutrition outcome. Beige shading indicates no improvement in the nutrition indicator. Yellow shading shows differing results based on specific analysis (ex. sub-groups of children or between reports) or specific measure (for example, prevalence versus average z-score). This table does not reflect statistical significance, but rather, generally shows effects on different nutrition outcomes of interest. Refer to Appendix II and individual studies for further details.

LITERATURE REVIEW



Cash Transfer Value: The studies distributed varying amounts of cash depending on the context and location, with transfer amounts ranging from approximately 6.5-30 USD per transfer (monthly for 4 programs, every-other-month for 1 program, and quarterly for 1 program).⁸⁻¹⁶ While the Minimum Expenditure Basket is typically used to determine cash transfer value in programs, this was not the case for any of the included studies in this review.¹⁷ Cash amounts were calculated according to varying criteria, such as being equivalent to approximately 25% of mean monthly household expenditure among poor, rural homes in Bangladesh, equaling 17% of total monthly household food consumption among participants at baseline in Nigeria, or being equivalent to approximately 3-4 days of work at minimum wage in Myanmar.^{8-9, 14-16} On the other hand, the study in Liberia determined their cash amount based on a previous study that had shown an impact in dietary diversity with a given cash amount.¹³ Two of the programs increased the cash amount during the study period.¹⁴⁻¹⁶ In Myanmar, the cash amount increased by 50% approximately 13 months into the 30-month program, whereas, in Nigeria, the cash amount increased by just over 14% in January 2017, after baseline data collection in August-October 2014 and before endline data collection began in August 2018.¹⁴⁻¹⁶

Cash Assistance Duration, Frequency, and Delivery Mechanism: All projects distributed cash for participants' entire enrollment in the study. The study in Myanmar specified that cash transfers were provided from time of enrollment until the index child reached 2 years of age, with the maximum cash exposure duration being 30 months in this study.⁸⁻¹⁶ For the other studies, cash exposure was for 12 months in Liberia, for 18 months in Pakistan, for 24 months in Bangladesh and Niger, and for 33 months in Nigeria. Four of the studies distributed cash monthly, whereas the study in Liberia distributed cash bi-monthly (every other month), and the study in Pakistan distributed cash quarterly.⁸⁻¹⁶ While some of the studies did not specify how cash was distributed, the reported cash transfer mechanisms included mobile money via mobile phones that participants received, bank transfers to recipient accounts, and collection from cashpoints after biometric verification.⁸⁻¹⁶

SBCC Interventions: Each study employed unique SBCC interventions, with most studies implementing SBCC interventions with multiple components, modalities, and focal points. Regarding the duration of SBCC components, the SBCC activities in both the Bangladesh and Myanmar programs lasted for about 2 years. On the other hand, in Niger, the SBCC component was implemented 3 months after the first cash transfer, for a total of 18 months of SBCC exposure and 24 months of cash exposure. The SBCC activities also lasted for 18 months in the Pakistan program. For the programs in Liberia and Nigeria, the duration of the SBCC intervention was not specified, however, it is assumed that it was for the 12 month duration of the project in Liberia and for the 33 month duration in Nigeria. Nigeria. Given the duration of the cash and SBCC components, it appears that the cash and SBCC interventions were largely implemented simultaneously, with only the Niger study specifying that SBCC activities began 3 months after the initial cash transfer.

Information around the specific SBCC interventions implemented in each study is available in **Appendix II** in the appendix. Broadly, SBCC programming across the programs were carried out by community health workers (CNWs, LHWs, CHAs), trained volunteers, and NGO and community workers...⁸⁻¹⁶ Modalities included group sessions (at the beneficiary-, household-, community-, and/or village-level), one-on-one counseling, mother-to-mother support groups, and, in the case of one study, messaging via posters, radio, text messages, cooking demonstrations, and health talks.⁸⁻¹⁶ Activities in group sessions included presentations, interactive components (songs, call-and-response, and times for Q&A), performances (role playing, skits), and demonstrations and aids (visual aids, picture booklets).^{8-12, 14-15}

The majority of interventions included multiple key messages and focal points in their SBCC programming, demonstrated in more detail in **Table A2**.8-16 The most common topics and focal areas covered in regard to nutrition included recommended practices related to: breastfeeding/lactation, complementary feeding, maternal nutrition, and dietary diversity, although micronutrients, lipid-based nutrient supplements, and signs of malnutrition were also covered as topics in some interventions.8-16 However, as depicted in **Appendix II**, the majority of SBCC interventions did not only include messaging around nutrition, but also around other technical areas.8-16 For example, five out of six studies reported including messaging around hygiene and/or handwashing, which have implications in nutrition outcomes.8-12, 14-16

LITERATURE REVIEW



Conclusions

Overall, this literature review highlights the need for more studies intentionally designed to test different SBC messages and modalities when combined with unconditional cash transfers for child nutrition outcomes. Findings also highlight the importance of designing cash + SBC interventions that allow implementers to have consistent engagement with recipient communities, integrate multiple SBC messages and components to increase reach, target both current and expecting mothers, are of adequate duration to see improvements in nutrition outcomes, and go beyond targeting only the mother or caregiver and instead encompass a household- and community-wide approach to facilitate supportive environments.⁸⁻¹⁶

Summary of Key Findings

The original aim of this literature review was to examine studies conducted in both humanitarian and development settings. However, as aforementioned, the studies included in this review were all implemented in development contexts, highlighting a need for further research around the use and impact of unconditional cash + SBC activities on child nutrition outcomes in humanitarian contexts. Nearly all (5 out of 6) of the interventions reviewed were at least 24 months in duration and reported positive impacts on child nutrition status (wasting, stunting), and one study demonstrated a greater impact on nutrition outcomes given longer exposure to the program (33 months). The majority of interventions (5) covered key topics beyond nutrition such as messaging related water, sanitation, and hygiene (WaSH). In addition to including multiple public health topics, nearly all the studies also implemented multiple SBC activities targeting populations at different levels of the child's ecosystem such as mother-to-mother support groups, cooking demonstrations, and nutrition-sensitive text messages to male and female caregivers. Multiple studies enrolled pregnant women and, subsequently, measured child nutrition outcomes postdelivery of the child, and one of those studies found that intervention impacts were more pronounced among children whose mothers had been enrolled and received cash + SBC interventions while pregnant. Nearly all the studies also targeted other members of the household and community with SBC to influence behavior change in the home and foster supportive environments for mothers and children. Lastly, while the aim of the literature review was to assess existing evidence on the effectiveness of different SBC activities, when combined with CVA, on achieving child nutrition outcomes, only one (1) was designed to directly compare different SBC interventions.

Recommendations

The varying study interventions, durations, contexts, and child age subgroups prohibit direct comparison of the effect of each intervention on a given nutritional outcome between studies. However, when considering the studies in their entirety as a body of evidence, numerous recommendations can be drawn.

- ✓ Further research is needed to determine the optimal length of Cash + SBC interventions and level of community engagement for child nutrition outcomes in humanitarian settings.
- ✓ Further research should be conducted to evaluate the effectiveness of various SBC modalities/activities on nutrition outcomes when combined with unconditional cash assistance in humanitarian settings.
- One study suggested that SBC interventions for nutrition outcomes should consider promoting multiple nutrition/health-related topics and consider using more than one modality and delivery mechanism, especially to reach different target populations.
- ✓ Given the impact of intervention on pregnant women, implementers may consider targeting Pregnant women for Cash + SBC interventions specifically aiming to achieve child nutrition outcomes.
- ✓ Additionally, Cash + SBC interventions may consider targeting other members of the household and community to further strength the child's ecosystem and create space for fathers to support both the mother and the child.

LITERATURE REVIEW



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Appendix I: General Search Strategy: Cash + SBCC for Nutrition Outcomes

Concept	Search Terms
Children-Under-Five	"Child, Preschool" [Mesh] OR "Infant" [Mesh] OR child* OR kid OR kids OR infant* OR baby OR babies OR toddler* OR infancy OR newborn* OR neonatal OR perinatal OR neonate*
Cash Assistance	Cash OR "cash assistance" OR "voucher assistance" OR "cash transfer*" OR finance* OR payment* OR money OR monetary OR monies OR allowance* OR "debit card*" OR prepaid
Social and Behavior Change Communication	"Health Communication" [Mesh] OR "Health Education" [Mesh:NoExp] OR "Health promotion" [Mesh:NoExp] OR "Communications Media" [Mesh] OR "wellness program" OR "health promotion" OR "health campaign" OR "behavior change communication" OR "behaviour change communication" OR "social behavior change" OR "social behaviour change" OR "communication for development" OR "nutrition counselling" OR "nutrition counseling" OR "nutrition group*" OR "support group*" OR "nutrition campaign*" OR "group education" OR "nutrition education" OR "media campaign" OR "social media" OR "mess media" OR "cooking demonstration*"
Nutrition	"Nutritional Status" [Mesh] OR "Nutrition Assessment" [Mesh] OR "Severe Acute Malnutrition [Mesh] OR "Child Nutrition Disorders" [Mesh] OR "Infant Nutrition Disorders" [Mesh] OR "Infant Nutrition Disorders" [Mesh:NoExp] OR "Wasting Syndrome" [Mesh:NoExp] OR "Growth Disorders" [Mesh:NoExp] OR nutrition* OR malnutrition OR malnourish* OR undernutrition OR undernourish* OR wasted OR stunt* OR height-for-age OR weight-for-height OR weight-for-age OR length-for-age OR weight-for-length OR underweight OR anthropometr* OR kwashiorkor OR marasmus OR oedema OR edema

Appendix II: Study Descriptions and Detailed Findings per Study

Bangladesh: The Transfer Modality Research Initiative (TMRI) ⁸⁻⁹			
Main Characteristics			
Location	Bangladesh		
Timing of Intervention	May 2012- April 2014		
Study Duration	2 years		
Age of Children	0-24 months at baseline; 0-60 months at endline (²)		
Primary Beneficiaries	Mothers of children 0-24 months old		
Trial Arms of Interest	Cash only arm, cash + nutrition behavior change communication (BCC) arm		
Nutrition Outcomes Assessed	Stunting (by HAZ and HAD), wasting (by WHZ), and undernutrition (by WAZ, considering stunting and wasting)		
Description of Intervention			
Cash Component	Approximately 19 USD equivalent transferred to mothers of children 0-24 months old monthly for 24 months via mobile money on phones that beneficiaries received ⁸⁻⁹		
SBC Component	SBCC components were implemented for 24 months. Trained CNWs conducted weekly group sessions in villages each week. ⁸ Sessions included presentations, demonstrations, Q&A, interactive songs, call-and-response, and role playing. Intervention recipients as well as		

² This is the age group terminology used in the report. However, based on outcomes assessed, it is assumed that these are cut points representing children <24 months and children <60 months, respectively.





additional household members were invited (husbands, additional PLW, etc.) to try improve behavior changes in the home and foster a supportive household environment.⁸⁻⁹

Topics covered included: the importance of adequate nutrition and dietary diversity for health, handwashing and hygiene for health, and micronutrients (vitamin A, iron, iodine, zinc), breastfeeding, complementary feeding (6-24 months), maternal nutrition.⁸⁻⁹

CNWs also visited beneficiaries at home twice a month to reinforce lessons from group sessions and address concerns.⁸⁻⁹

Main Findings of Impact of Cash + SBCC Arm Compared to Cash Only Arm

Impacts on Stunting

Among different sub-analyses of program participants, the Cash + Nutrition BCC arm consistently had a significant positive effect on HAZ, whereas the Cash Only arm did not have a significant effect.⁸

Among children of household heads aged 0-48 months at endline, the Cash + Nutrition BCC arm statistically significantly increased HAZ by 0.248 SD (p=0.01 when comparing Cash + Nutrition BCC arm to Cash Only arm), decreasing stunting by 7.8% (0.03). Cash + Nutrition BCC arm also statistically significantly increased HAD by 0.95 centimeters. The Cash Only arm did not have a statistically significant impact on HAZ or HAD, only increasing HAZ by 0.035 SD and HAD by 0.063 centimeters and decreasing stunting by 0.8% (not statistically significant).⁸

Among children of household heads only observed at baseline (excluding children born after) aged 24-48 months, the Cash + Nutrition BCC arm statistically significantly increased HAZ by 0.210 SD, whereas the Cash Only arm only increased HAZ by 0.106 (not statistically significant).⁸

Among all children aged 0-48 months at endline, the Cash + Nutrition BCC arm statistically significantly increased HAZ by 0.231 SD, whereas the Cash Only arm had an insignificant effect on HAZ, only increasing HAZ by $0.059\,\mathrm{SD}.^8$

Among all children observed at baseline (excluding children born after) aged 24-48 months, the Cash + Nutrition BCC arm statistically significantly increased HAZ by 0.189 SD, whereas the Cash Only arm had an insignificant impact on HAZ, leading to a 0.105 SD increase.⁸

Impacts on Wasting

Neither the Cash + Nutrition BCC arm nor the Cash Only arm had a significant impact on $WHZ.^8$

Impacts on Undernutrition (Combining Stunting and Wasting)

Neither the Cash Only nor the Cash + Nutrition BCC arms showed a statistically significant impact on undernutrition at endline. The undernutrition coefficient for the Cash Only arm was 0.01 (0.03 SE), whereas it was -0.04 (0.03 SE) for the Cash + Nutrition BCC arm. However, the p-value comparing these two arms to each other in regards to undernutrition as an outcome was 0.12, demonstrating that there was not a statistically significant difference between arms.

Conclusions

To improve child nutritional status, interventions should focus on addressing multiple, rather than just one, nutrition issue (diet quality, total energy intake, maternal knowledge).⁸

Niger: National Safety Net Program¹⁰

Main Characteristics

Location Niger





Timing of Intervention	April 2012- April 2015	
Study Duration	~2 years	
Age of Children	6-59 months	
Primary Beneficiaries	Women from poor household	
Trial Arms of Interest	Cash Only arm, Cash + BCC arm	
Nutrition Outcomes Measured	Stunting (by HAZ), wasting (by WHZ), and underweight (by WAZ)	
	Description of Intervention	
Cash Component	Approximately 20 USD equivalent transferred to women from poor, rural households monthly for 24 months via national safety net systems 10	
SBC Component	SBC activities were implemented 3 months after the first cash transfer, for a total SBCC duration of 18 months. NGO and community workers held monthly community meetings, village assemblies, and household visits to train parents on activities to improve child protection, nutrition, health, and psycho-social stimulation, using role playing, skits, and visual aids. The community educators held the household visits and small group meetings (~25 beneficiaries), whereas the NGO operators held the village assemblies (~50 households). BCC curriculum included 14 modules with 4 domains: nutrition (EBF, complementary feeding, malnutrition signs), health (health service utilization, family planning, hygiene/handwashing, prevention of child diseases), psycho-social stimulation (school readiness, brain development, language and play stimulation, school attendance), child protection (conflict management, punishment/discipline, birth registration, attachment, socio-emotional development). SBCC intervention occurred for 18 months, starting 3 months after the first cash transfer. SBCC intervention occurred for 18 months, starting 3 months after the first cash transfer.	
Ма	ain Findings of Impact of Cash + SBCC Arm Compared to Cash Only Arm	
Impacts on Stunting, Wasting, and Underweight	Neither the Cash + BCC arm nor the Cash Only arm had a statistically significant effect on child anthropometry, considering HAZ, WHZ, and WAZ. Among recipients of cash, the BCC intervention did not result in improved nutrition outcomes in comparison to beneficiaries only receiving the cash. ¹⁰	
Conclusions		

In such poor settings, BCC alone with nutrition practice changes are not enough to significantly impact nutritional outcomes of children.¹⁰ Rather, multiple, complementary investments may be needed to address the underlying determinants of malnutrition; for example, coordinating the BCC component with the WASH, education, and health sectors and improving monitoring and identification of malnutrition in Niger.¹⁰ More attention is needed towards maternal nutrition (ex. targeting pregnant women).¹⁰ Research is needed to understand how BCC, cash transfers, and supply-side interventions that directly supply nutrition support and/or increase service quality complement each other.¹⁰

Pakistan: Benazir Income Support Programme (BISP), Poverty Alleviation and Social Safety Division and the Integrated Reproductive Maternal Newborn, Child Health & Nutrition Program¹¹⁻¹²

Main Characteristics	
Location	Pakistan
Timing of Intervention	April 2017- November 2019
Study Duration	~2.5 years





Timing of Intervention	January 2020- January 2021	
Location	Liberia	
Main Characteristics		
There is a need for additional large-scale trials to provide further evidence. 11-12 Liberia: Grand Gedeh County Cash and Education Trial 13		
There is a pood for additions		
	and underweight rate ratios were seen at 12, 18, or 24 months of age. 12 Conclusions	
	Another analysis showed a statistically significant difference between the Cash + SBCC arm versus the Cash Only arm in child weight (p=0.025), WAZ (p=0.046), and mean WLZ (p=0.013) at 24 months of age, however, with weight, WAZ, and WLZ lower in the Cash + SBCC arm than in the Cash Only arm. No statistically significant difference was observed between the Cash + SBCC arm and Cash Only arm in LAZ, in wasting risk, or in underweight risk at 24 months. No statistically significant differences were seen at 6, 12, or 18 months of age between these arms, and no statistically significant differences in stunting, wasting,	
Impacts on Stunting, Wasting, and Underweight	One analysis comparing rate ratios found that neither the Cash + SBCC arm nor the Cash Only arm showed any statistically significant impact on stunting, wasting, or underweight among children 6-23 months of age at 12, 18, or 24 months of age according to adjusted rate ratios compared to the control group (no intervention) or compared to each other. However, at 18 months of age, the Cash + SBCC showed a marginally statistically significant improvement in wasting (Adjusted rate ratio = 0.65, 95% CI: 0.41-1.01, p = 0.057) relative to the control arm. 11	
Ма	ain Findings of Impact of Cash + SBCC Arm Compared to Cash Only Arm	
	LHWs underwent a two-day SBCC training that taught communication skills, dietary diversity for children, and complementary feeding introduction. During the program, LHWs also attended a one-day refresher training session. 11-12	
	SBC topics focused on IYCF practices, lipid-based nutrition supplements (LNS), WASH, and maternal nutrition. $^{11-12}$	
SBC Component	The duration of the SBC activities were not specified, but it is assumed that they lasted for the 18-month duration of the program. Lady health workers (LHWs) conducted monthly household visits where they provided nutrition, health, and hygiene messages. LHWs also held quarterly community sessions and used a specialized picture-booklet. ¹¹⁻¹² Each mother/caregiver received 18 household individual sessions and 6 community sessions. ¹¹⁻¹²	
Cash Component	Approximately 30 USD equivalent transferred on a quarterly basis to caregivers of children 6 months of age quarterly for 18 months, collected from cashpoints after biometric verification 11-12	
7.104.541.64	Description of Intervention	
Nutrition Outcomes Measured	Stunting (by LAZ), wasting (by LHZ), and underweight (WAZ)	
Trial Arms of Interest	BISP (Cash transfers) arm, BISP + SBCC arm	
Primary Beneficiaries	Caregivers of children 6 months of age with a poverty score < 16.17. Most beneficiaries were grandmothers or other household members, not mothers of the children. ¹¹⁻¹²	
Age of Children	Children 6-24 months: children enrolled at 6 months and followed for 18 months until 24 months old ¹¹⁻¹²	





Study Duration	12 months	
Age of Children	Children 6-23 months	
Primary Beneficiaries	Caregivers	
Trial Arms of Interest	Cash Only arm, Cash + Nutrition Education arm	
Nutrition Outcomes Measured	Malnutrition (by MUAC)	
	Description of Intervention	
Cash Component	Approximately 30 USD equivalent transferred to caregivers bi-monthly (every other month) for $12 \text{months}.^{13} \text{Transfer modality not specified}.$	
SBC Components	The duration of the SBC activities were not specified, but it is assumed that they lasted for the 12-month duration of the program. Community health assistants provided in-home nutrition counseling and education bi-monthly, focusing on complementary feeding (6-23 months) and utilizing culturally and contextually relevant situations. ¹³	
Main Find	lings of Impact of Cash + Nutrition Education Arm Compared to Cash Only Arm	
Impacts on MUAC	During the study, child MUAC was measured every other month from months 2-12 of the intervention. 13 The authors did not make direct statistical comparisons between the Cash + Nutrition Education arm and the Cash Only arm. 13 Rather, they compared each arm to the no intervention control arm. 13 At 6 months, the Cash + Nutrition Education arm and the Cash Only arms had the same average MUAC of 15.28 centimeters. 13 Both arms had statistically significantly higher MUAC values compared to the no intervention control arm (Cash + Education Arm: 15.28 vs. 14.65, p < 0.001; Cash Only Arm: 15.28 vs. 14.65, p < 0.001) at this time point. At every other time point (other than 6 months), mean MUAC was slightly higher in the Cash Only group than in the Cash + Nutrition Education group. 13 However, on average, both intervention arms had higher mean MUAC than the no intervention control arm. 13	
Conclusions		

The trial was initiated just before COVID-19, which led to protocol changes including bimonthly visits for 12 months as opposed to monthly visits for 6 months. 13 The researchers were not able to measure the effect of cash beyond 12 months, and pandemic supply issues and the rural setting resulted in not being able to consistently measure height and weight and therefore reliably assess anthropometry. ¹³ Additionally, there were some baseline differences across arms. ¹³

There is a need for large, multicenter trials to assess impacts on child growth from cash. There is a need to assess the sustainability of cash interventions. 13

Myanmar: Learning, Evidence Generation, and Advocacy for Catalyzing Policy (LEGACY) Trial ¹⁴⁻¹⁵		
Main Characteristics		
Study Location	Myanmar	
Timing of Intervention	2016- 2019	
Study Duration	30 months	
Age of Children	Children aged 0-5 years (³); however, most anthropometric data focuses on children 6-29 months old ¹⁴⁻¹⁵	

³ This is the age group terminology used in the report. However, based on outcomes assessed, it is assumed that this age group technically represents children under 5.





Primary Beneficiaries	Women who are pregnant (in 2^{nd} or 3^{rd} trimester) or have a child under 2 years of age ¹⁴⁻¹⁵		
Trial Arms of Interest	Cash Only arm, Cash + SBCC arm		
Nutrition Outcomes Measured	Stunting (by HAZ), underweight (by WAZ), and wasting/acute malnutrition (by WHZ and MUAC)		
	Description of Intervention		
Cash Component	Approximately 6.5 USD equivalent transferred to pregnant women or women with a child under 2 years of age monthly for 24-30 months (from enrollment until child reached 2 years of age, for a maximum exposure to cash for 30 months) via an ad-hoc bank account $^{14-15}$		
SBC Component	There were two phases of SBC programming over approximately a two-year period. $^{14-15}$ The first phase occurred from May 2016- January 2017 and included mother-to-mother support groups (~12-15 pregnant women and women with CU5) focused around pregnancy feeding practices, early childhood feeding, and lactation. $^{14-15}$ The first phase also included community sessions (~13-15 members) focused on nutrition and diet, healthcare, and expenditures (HH and food-related). $^{14-15}$		
	The second phase included intensive sessions (both to mother groups and through sessions targeting HH elders and fathers) focused on messaging to promote recommended behaviors around the following areas: health-seeking behaviors, household expenditures, hygiene practices, and IYCF (breastfeeding, dietary diversity). Individual counseling sessions were also held with mothers who were having difficulties with breastfeeding and/or complementary feeding. In the session of the session o		
	The SBCC component occurred monthly for 30 months. 14-15		
	Main Findings of Impact of Cash + SBCC Arm Compared to Cash Only Arm		
Impacts on Stunting	In one analysis: When restricting the analysis to children of women who were pregnant at baseline in order to assess the effect of receiving the entire intervention duration, the Cash + SBCC arm statistically significantly decreased overall stunting by 4.6% (p < 0.05) in children 22-35 months old, whereas the Cash Only arm had no statistically significant effect relative to control. Therefore, the Cash Only arm and Cash + SBCC arm had differential impacts on stunting (p<0.02). 14		
	Compared to the Cash Only arm, the Cash + SBCC arm had a statistically significant positive effect on HAZ distribution, although this is only true in low SES villages, as the program was most effective in low SES areas. 14		
	Overall, statistically significant improvements with the Cash + SBCC arm were only seen in moderate stunting cases, not among those severely stunted. 14		
	In another analysis: After 2 years of intervention implementation and including all children 6-29 months old, the Cash + SBCC arm showed a 4% decrease in the proportion of stunted children aged 6-29 months (from 30% to 26%, p<0.1) compared to the no intervention control, and a statistically significant 4.4% decrease in the percent of moderately stunted children (24% to 19.6%, p < 0.05). 15 Among the Cash + SBCC arm, decreases in stunting were greater among children exposed to the program for longer and aged 24-29 months, resulting in a 5.4% decrease (from 36% to 30.6%, p<0.1). 15 The Cash Only arm did not show a statistically significant effect on stunting, among children 6-29 months. 15		
	The Cash + SBCC arm group showed a significant improvement in HAZ in comparison to the Cash Only arm (p<0.05). 15 However, the Cash + SBCC arm showed no statistically significant impact on severely stunted children. 15		





Impacts on Wasting	The Cash + SBCC arm showed a 2.8% decrease in moderate acute malnutrition (MAM) prevalence (11% to 8.2%, p<0.1) among children 6-29 months old compared to the no intervention control, whereas the Cash Only arm showed a 2.6% decrease in MAM (11% to 8.4%, p < 0.1). Comparisons were not made between the Cash + SBCC arm and Cash Only arm. 15	
Impacts on Underweight	No statistically significant impacts on underweight were reported. 15	
Canalysians		

Conclusions

As the program only improved stunting among children who were moderately stunted, more intense approaches are needed to improve malnutrition among children that are the most vulnerable (ex. severely stunted).¹⁴

The impact of the SBCC component demonstrates that information constraints contribute to suboptimal "incomeelasticity."¹⁴Therefore, it is important for policy to include behavior change with cash transfers to improve child nutrition outcomes (ex. knowledge needed on knowing the quality and quantity of foods to purchase).¹⁴

Cash alone might not be adequate to impact children's nutrition outcomes. $^{14-15}$ Cash alone does not improve chronic malnutrition prevalence, as there is a need for information components to increase maternal knowledge on recommended use of disposable income. $^{14-15}$ Therefore, if cash transfers are targeting young children, they should be combined with SBCC approaches, as a greater impact was seen with a longer duration of program exposure (there was a more pronounced impact in children receiving nearly 30 months of Cash + SBCC exposure since pregnant mother was enrolled), indicating the importance of targeting the first 1000 days. 15

Further research around the SBCC curriculum is needed to know what works the best for impacting nutrition outcomes of children. There is a need to know what worked well and what can be improved and a need to emphasize key messages that have maximum impacts. Additional research is needed to test the effectiveness of more "minimal and cost-effective" SBCC packages and on mechanisms of Cash + SBCC. 14-15

Nigeria: Child Development Grant Programme (CDGP) ¹⁶	
Main Characteristics	
Study Location	Nigeria
Timing of Intervention	August 2014- October 2018
Study Duration	33 months
Age of Children	Children aged 0- <2 years
Primary Beneficiaries	Pregnant women and women with children under 2 years of age
Trial Arms of Interest	Cash + Low-Intensity SBCC arm, Cash + High-Intensity SBCC arm
Nutrition Outcomes Assessed	Stunting (by HAZ), wasting/acute malnutrition (by WHZ and MUAC), and underweight (by WAZ)
Description of Intervention	
Cash Component	Approximately 21.60 USD transferred to pregnant women and women with children under 2 years of age monthly for 33 months. Transfer modality was not specified. 16
SBC Component	The duration of the SBCC activities was not specified, although it is assumed that activities were implemented for the 33-month duration of the program. SBCC focused on nutrition and health education and advice, including knowledge and practice around infant feeding and BF, targeting both women beneficiaries in addition to men and other community members. Two SBCC designs tested: "low-intensity" SBCC includes posters, radio messaging, text messaging, health talks, and food demonstrations. High-intensity includes the low-intensity SBCC interventions plus support groups and women's one-on-one counselling

LITERATURE REVIEW



sessions with trained volunteers. It was unclear for how long or how often SBCC interventions were implemented. 16

Key messages surrounded exclusive breastfeeding, timing of breastfeeding initiation, complementary feeding, hygiene and sanitation, healthcare-seeking, antenatal care, eating during pregnancy, and nutritious foods. ¹⁶

Main Findings of Impact of Cash + High-Intensity SBCC Arm Compared to Cash + Low-Intensity SBCC Arm

Impacts on Stunting, Wasting, and Underweight

The researchers ended up needing to mainly pool results from the low- and high-intensity SBCC communities, as crossover was apparent and the two levels seemed to be implemented more alike than intended. Therefore, their main analysis compares the pooled Cash + SBCC arms to the no intervention control arm. However, in the annex, they do show some findings between the low- and high-intensity SBCC arms. However, in the annex is the same and high-intensity SBCC arms.

Not many statistically significant differences were found between the Cash + Low-Intensity SBCC arm and the Cash + High-Intensity SBCC arm, however, relative to baseline, improvements in HAZ and stunting are observed.¹⁶

Among children born after baseline and before the midline, there is a statistically significant comparison between the low-intensity and high-intensity SBCC arms at endline in the percent of children stunted (p=0.04) (-8.71 CDGP effect among low-intensity SBCC vs. only -2.02 CDGP effect among high-intensity SBCC), the percent of children severely stunted (p=0.02) (-7.94 CDGP effect among low-intensity SBCC vs. only -1.57 CDGP effect among high-intensity SBCC) and the percent of children underweight (p=0.03) (-5.70 CDGP effect among low-intensity SBCC vs. only -0.17 CDGP effect among high-intensity SBCC). 16

Among children born after the midline and before the endline, there are no statistically significant differences in CDGP effect between low- and high-intensity SBCC areas in anthropometric outcomes.¹⁶

Conclusions

It is effective to provide SBCC messaging through different channels, as the data showed that women and men access SBCC messages via different means.¹⁶

There is a need for trained volunteers to have continued engagement with communities in order to increase SBCC messaging impact.¹⁶

The "low-intensity" SBCC strategy might be adequate to improve beliefs and knowledge. 16

The authors believe the results underestimate the impact of CDGP, as the evaluation is on an 'early' version of the intervention, contains a non-representative sample, there is potential self-reporting bias, and there was 22% attrition resulting in a significantly smaller sample at endline than at baseline. Additionally, similar implementation of the low- and high-intensity SBCC treatments prohibited further exploration of differences in impact.