

Cash and In-Kind Transfers in Humanitarian Settings

A Review of Evidence and Knowledge Gaps

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Abstract

Over the past decade, humanitarian assistance and social protection have increasingly emerged as a policy response tool to support crisis-affected populations facing conflict or natural disasters. This paper conducts a descriptive literature review on the evidence base of non-contributory humanitarian assistance interventions in low-and-middle income countries. It uses evidence from 21 experimental or quasi-experimental studies to understand the effects on five outcome domains: (i) basic needs, (ii) financial outcomes, (iii) gender, (iv) human development, and (v)

social cohesion. The findings show that gender, human development, and social cohesion are the least explored outcomes in humanitarian contexts. Moreover, evidence is scarce on the comparative performance of different modalities (for example, cash vs. in-kind), targeting mechanisms, cost-effectiveness of alternative interventions, heterogeneity analysis, and longer-term effects of interventions. The paper makes the case that there is a high dividend to be earned from conducting more impact evaluations in humanitarian settings.

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Cash and In-Kind Transfers in Humanitarian Settings: A Review of Evidence and Knowledge Gaps*

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1. Introduction

A humanitarian crisis is a singular event or a series of events that threaten the health, safety, or well-being of a community or large group of people.¹ According to the 2021 Global Humanitarian Overview Report, an estimated 235 million people have needed humanitarian assistance and protection, an increase of more than 65 million from the previous year (UNOCHA 2020). In addition, over 91.9 million individuals were estimated to have been forcibly displaced worldwide in 2020 due to prosecution, conflict, generalized violence, or other human rights violations, representing an increase for the eighth consecutive year (UNHCR 2020). The need for humanitarian assistance and social protection has been exacerbated by the COVID-19 pandemic, which presents an unprecedented challenge to the humanitarian system in both scale and complexity. It is, therefore, more important than ever to have reliable and rigorous evidence on the impact of humanitarian response programs, that is, “what works,” in addressing the needs of crisis-affected populations, as well as how cost-effective the implementation of such programs is, so that donors, aid agencies, and policymakers can make informed decisions and target those in greatest need.

In the last decade, the use of social protection programs in humanitarian contexts has increasingly emerged as a policy response tool to address poverty and hunger (Ulrichs and Sabates-Wheeler. 2018).² Moreover, as part of the commitments under Sustainable Development Goal 1, the global community has agreed to expand the coverage of social protection measures for all and to achieve substantial coverage of the poor and the vulnerable by 2030 (United Nations 2015).³ This expansion also includes the scale-up of social protection programs in humanitarian contexts (fragile and conflict-affected populations), which we define in this paper as humanitarian assistance interventions.

¹ For more information on humanitarian crisis, see [Humanitarian Coalition](#) (last accessed December 2021).

² In more stable developing contexts, a vast literature in social sciences shows that social protection programs help reduce poverty and inequality, enhance livelihoods, and have long-term positive impacts on human capital development (Baird et al., 2014; Bastagli et al., 2016; Davis et al., 2016; Handa et al., 2018; Hidrobo et al., 2018).

³ According to the 2020 Global Humanitarian Assistance Report, there is a clear upward trend in the use of social protection programs in the form of cash and vouchers. For example, the use of cash-based transfers in humanitarian crises has doubled since 2015, amounting to a total volume of US\$5.6 billion or 17,9 percent of the global humanitarian assistance in 2019. However, cash and voucher transfers still account for a minor share of humanitarian assistance, with the majority of the humanitarian portfolio being provided in-kind (CaLP 2020, Overseas Development Institute 2015).

Social protection in development settings comprises social assistance tools (e.g., unconditional and conditional cash transfers, vouchers, social insurance, labor market interventions, etc.) that are generally operated by governments as a response to long-term structural issues. On the other hand, humanitarian assistance tends to focus on emergency or one-off responses to address urgent needs of crises-affected populations, and it is mainly implemented through international humanitarian actors in contexts where governments are too fragile to respond. Even though humanitarian crises are generally attributed to a single and distinct event that occurs with little or no warning (sudden onset), most humanitarian crises are complex, protracted, and chronic (slow onset), evolving from a series of events that exacerbate vulnerabilities of a population over a prolonged period (UNOCHA 2018).

The main objective of this review is to assess and summarize the state of the existing knowledge on the effects of humanitarian assistance interventions and to identify evidence gaps in the literature for future research and for evidence-based decision-making by policymakers and practitioners. In doing so, we address two research questions within the context of humanitarian settings. First, what are the impacts of humanitarian assistance programs on individual and household-level outcomes? Second, what is the relative effectiveness and efficiency of different modalities and delivery channels in achieving their objectives? Drawing on evidence from experimental and quasi-experimental studies conducted in low- and middle-income countries and using a narrative approach, we examine the overall effects of humanitarian assistance programs on a wide range of individual and household-level outcomes such as basic needs, financial outcomes, gender, human development and social cohesion. We focus our review on the impact of humanitarian assistance interventions in the form of unconditional cash transfers (UCTs), conditional cash transfers (CCTs), food transfers (FT), vouchers, and public works (PW) as these are the most widely used forms of transfers and, therefore, a priority for evidence generation in the humanitarian sector.

There have been a few systematic reviews on cash and in-kind interventions in humanitarian contexts (Gentilini, 2016; Puri et al., 2017; Doocy & Tappis, 2018; Aurino and Giunti, 2021). Doocy and Tappis (2018)'s review examines the impacts and value for money of cash-based interventions on emergency-affected populations. On the other hand, Gentilini (2016) focuses on studies that compare alternative transfer modalities (e.g., cash vs. food) in order to understand which modality is more effective. Using evidence from the literature, Puri et al. (2017) assess how

rigorous impact evaluations can help inform and improve different types of interventions in humanitarian emergencies, including cash and in-kind transfers. Aurino and Giunti's (2021) review is the closest to our study in terms of the study inclusion criteria. They review studies that measure the impact of emergency cash, food, or other in-kind transfers, but their study differs in its focus on child development outcomes. Our review complements these existing reviews by including more recent rigorous studies that evaluate the impact of unconditional or conditional cash and in-kind transfers in humanitarian settings. We also analyze the impacts on a more comprehensive set of outcomes that have been overlooked by the existing literature, including human capital, women's empowerment, and social cohesion. Therefore, this systematic review provides an overview of the evidence to date on humanitarian assistance programs and discusses several promising future research directions to help close the knowledge gaps, flagging particularly promising interventions for practitioners and policymakers.

Taken together, there are five stylized findings that emerge from our review. First, despite the growing use of social assistance programs in humanitarian settings, there is relatively little rigorous research on what works, for whom, and why. From our review, we find that only 21 studies use experimental or quasi-experimental methods to rigorously assess the impact of humanitarian assistance programs, and almost none of them discuss the cost-effectiveness or longer-term effects of such interventions.

Second, the evidence base for humanitarian assistance programs across different sectors or outcomes of interest varies significantly. On the one hand, we find that most evidence in humanitarian settings concentrates on basic needs outcomes, such as food security, food and non-food expenditure and coping strategies. This is followed by studies that report household financial outcomes such as assets, income, credit and savings, where the evidence can be characterized as emerging. On the other hand, there is a dearth of studies examining human development outcomes, such as health, education and labor, as well as gender and social cohesion. In particular, we find that women's empowerment and gender-based violence outcomes are the least explored in the context of humanitarian assistance programs.

Third, in terms of the impact of humanitarian assistance programs, the limited evidence points to mixed and inconclusive results for outcomes that are not typically studied. While the literature suggests that most humanitarian assistance programs can effectively improve basic

needs outcomes such as food security and expenditures, it is difficult to draw general conclusions on other outcomes. The small number of studies show mixed conclusions on income, credit and savings, labor, gender-based outcomes, and social cohesion. For this reason, it is important to emphasize the relevance of context-specificity for successful approaches to humanitarian assistance programs. This means that program design needs to be tailored to the specific type of crises and to the broader context in which the crisis takes place, as these factors are some of the main determinants for feasibility of implementation and uptake by targeted beneficiaries.

Fourth, regarding the relative effectiveness of different modalities, the decision about the most appropriate modality versus another cannot be generalized and pre-determined. The modality performance depends on the nature of the humanitarian crisis (sudden onset vs. slow onset), the objective of the program or the main outcome of interest, the profile of the targeted population, implementation costs, and local market capacity, among others. This reflection highlights the need for future research to better understand the conditions under which cash transfer are more effective than in-kind transfers.

Fifth, the evidence from our review indicates that cash transfers are more efficient to deliver than in-kind modalities, implying that they might be more cost-effective on average. Given the lack of evidence on cost-effectiveness, we argue that future impact evaluations need to provide a more robust analysis for cost calculations of humanitarian assistance programs.

This paper is organized as follows. Section 2 describes the methodological approach used in this systematic review. Section 3 presents the impacts of humanitarian assistance programs on the main outcomes across different domains using rigorous impact evaluations. In this section, we also discuss the efficiency of these interventions in terms of implementation costs. In Section 4, we assess the relative effectiveness of different transfer modalities. Section 5 discusses the evidence gaps and proposes new areas for research. Finally, Section 6 summarizes our key findings, and discusses implications for policy making.

2. Methodology

To answer our main research questions, we conducted a systematic review of the experimental and quasi-experimental literature focused on humanitarian assistance programs. In this review, we organize and present our findings in different outcome domains at the individual

and household level. This section describes the process we followed for identifying studies to use in our analysis, which consisted of three iterative stages: (i) search and inclusion criteria, (ii) screening process, and (iii) data extraction. We also describe how we mapped study-specific outcomes onto broader outcome categories.

2.1 Identification of Studies and Inclusion Criteria

We collected information on humanitarian assistance interventions through computer-aided searches and reviews of reference lists in the studies identified. A primary systematic search for peer-reviewed and grey literature was conducted in several search engines and databases using a combination of predetermined keywords and vocabulary for social assistance and emergencies, which are presented in **Table 1**. In addition to the database search, the bibliographies and citations of included studies were thoroughly analyzed for further studies that met inclusion criteria. We also reviewed websites of organizations working in the humanitarian field (e.g., Oxfam, Mercy Corps) to search for relevant grey literature. Lastly, we also contacted experts and researchers who have frequently published on the impacts of social safety net programs in peer-reviewed journals and asked them to indicate any other relevant published studies that we could incorporate in our review.

Table 2 describes the inclusion criteria. First, we sought to include studies that were set in humanitarian crises. For this review, a humanitarian crisis is defined as a singular event or a series of events that threaten the health, safety, or well-being of a community or large group of people. Among policymakers, there are two recognized types of humanitarian crises: (i) sudden onset, which is a single, distinct event that occurs with little or no warning (e.g., earthquake); and (ii) slow onset or protracted crises, which are more complex humanitarian crises that demand prolonged assistance over several years (e.g., severe drought or ongoing conflict). In this review, we focus on both types of humanitarian assistance scenarios. These humanitarian crises are often categorized further into three broad categories: (i) natural disasters, (ii) conflict-related emergencies, and (iii) health outbreaks. Programs implemented before the onset of the humanitarian crises and evaluated during the humanitarian crises were excluded from the review.

We limit our analysis to programs that provide humanitarian assistance to crisis-affected populations in the form of unconditional cash transfers (UCTs), conditional cash transfers (CCTs),

food transfers (FT), vouchers, and public works (PW) as these are the most widely used forms of transfers and, therefore, evidence priority in the humanitarian sector. In this process, we excluded other types of interventions in humanitarian settings such as microfinance, WASH, community-driven development programs or peacebuilding activities, and health and medical assistance. We decided to focus primarily on non-contributory humanitarian assistance interventions because many governments and humanitarian actors have recently started to use social protection tools in humanitarian settings, but very little is known about their effectiveness in such contexts.⁴

Studies included in this review were required to employ either experimental or quasi-experimental designs that can isolate the causal impact of humanitarian assistance programs on outcomes of crisis-affected populations. We required that studies were either randomized control trials or that they estimated intervention effects using one of the following quasi-experimental methods: difference-in-difference, propensity score matching, instrumental variables, regression discontinuity design, or another causal estimation technique. We also included experimental studies that did not have a pure control group, which are particularly relevant in humanitarian settings. Studies that did not establish any counterfactual were excluded.

The search did not impose restrictions on the timing of publication, although focusing on experimental and quasi-experimental evaluation designs effectively limits our attention to studies published after 2007.

In terms of types of studies, publication in a peer-reviewed journal was not a strict requirement for inclusion. We also included studies from working paper series (e.g., World Bank Policy Research, CDG, IFPRI) and technical reports only if they included a suggested formal institutional citation. This analysis is also restricted to low- and middle-income countries (as defined by the country-income groupings of the World Bank), where most humanitarian assistance programs are implemented, with no other explicit population exclusion criteria.

⁴ It is important to note that the evidence from development contexts cannot be applied directly to complex humanitarian contexts since the latter are characterized by harsher conditions such as increased economic, social, institutional, and security challenges. This situation creates an important knowledge gap, particularly in terms of the design and implementation of effective social protection measures in humanitarian settings.

2.2 Screening Process

The screening of studies and the application of inclusion and exclusion criteria took place in two rounds. In the first round, all studies that appeared in the search process were classified as potentially eligible or excluded by only reviewing the citation and abstract. During this round, studies were deemed ineligible if they did not meet the following inclusion criteria: (i) not a humanitarian setting, (ii) not a social assistance program, (iii) duplicates, and (iii) of no relevance to the study question. The majority of ineligible studies were not from a humanitarian setting or duplicates of another report. If duplicate studies published in different formats appeared in the search process, studies published in an academic journal were included rather than identical studies published as technical reports.

In the second screen, each potentially eligible study from the first screen was assigned to two reviewers for full-text review. Each reviewer read the full text of the study and assessed study features meant to proxy for study quality in terms of methodology, including the use of an evaluation design that would generate causal impacts. For instance, to be included in our final sample, studies needed to isolate the impact of the humanitarian assistance program using some sort of comparison group and report the precision of estimated effects. Considering all these criteria, each reviewer rated studies as “For Review” or “Excluded,” and the reason for exclusion was recorded accordingly. All studies for which there were any doubts or disagreements about potential eligibility were discussed by all authors to arrive at a final rating. This final process resulted in a total of 21 included studies that were assigned for data extraction.

2.3 Data Extraction and Description of Included Studies

We extracted three types of information from each of the included studies: study, intervention (contrast), and outcomes. *Studies* are defined as independent publications of humanitarian assistance programs (e.g., journal articles, working papers, technical reports). *Interventions (Contrasts)* represent the different treatment arms/contrast groups of a program within a study. For example, a study might provide one group of beneficiaries with a cash transfer, a second group with a food transfer, a third group with a voucher, and a fourth group with no transfer. For our analysis, these would produce four interventions/contrasts. *Outcomes* are comparisons of treatment and comparison groups on a set of outcome measures. Given the small sample size of studies in this review, we did not have enough power to conduct a meta-

regression analysis which aggregates evidence across studies to estimate an average effect size for each class of outcomes. For this reason, we conducted a narrative literature review on the state of evidence of humanitarian assistance interventions.

2.3.1 Study level

Table 3 provides the characteristics of the studies in our sample.⁵ **Appendix Table 1** presents additional details of each study, including intervention components and evaluation design. **Table 3** shows that half of the studies we reviewed are published in peer-reviewed journals, one-third are technical reports from research institutions the remaining 14 percent are working papers. Less than half of the studies (43 percent) used experimental methods (RCTs), which highlights the methodological, logistical and ethical challenges of conducting RCTs in humanitarian settings. Among those that used RCTs, 20 percent of the studies do not have a pure control group, which means they compared different modalities (e.g., one group receives conditional cash transfers while the other group receives food transfers). Around one-third of the studies also reported cost analyses of the evaluated interventions, but only four discussed the cost-efficiency of different modalities.

Figure 1 shows the geographic distribution of the studies, demonstrating coverage across 12 different countries but a concentration of research in Africa.⁶ The twenty-one studies correspond to seventeen humanitarian assistance programs across the world. On average, there are 1.2 studies per program--sometimes we reviewed more than one study on the same humanitarian assistance program that reported different outcome variables.

Most of the studies (75 percent) are from a conflict-affected setting, and they are evenly split between refugee-camp and non-camp settings, while the remaining five (25 percent) were in a natural disaster setting. We did not find any published studies that report humanitarian assistance impacts from a health outbreak setting, which also met our inclusion criteria. The publication year ranges from 2007 to 2020, with the number of studies growing in recent years. **Figure 2** illustrates the increasing trend in publications, particularly since 2019.

⁵ At the study level, we document author name(s), publication year, country, publication type, humanitarian crisis type, regional distribution, and impact evaluation design.

⁶ The twenty-one studies consist of eight studies in Africa (DRC, Ethiopia, Mali, Niger, and Uganda), seven studies in the Middle East (Jordan, Lebanon, and Yemen), three studies in Latin America (Ecuador), and three studies in Asia (Fiji, Sri Lanka, and the Philippines).

2.3.2 Intervention (contrast) level

We also extracted information about the evaluated interventions, and **Table 4** summarizes the characteristics of the treatment arms of the included studies.⁷ **Appendix Table 2** presents additional characteristics of the programs evaluated in each country.

We assigned humanitarian assistance interventions to *at least* one of five intervention categories: (i) unconditional cash transfers (UCT), (ii) conditional cash transfers (CCT), (iii) vouchers, (iv) food transfers (FT), and (v) public works (PW). Each humanitarian assistance *program* combines one or more of these five intervention categories, implemented mainly by international organizations (e.g., World Food Programme, UNICEF) and non-governmental organizations (e.g., Concern Worldwide, Mercy Corps, IRC, Oxfam). In fewer cases, these programs have also been implemented by governments.

We reviewed 42 humanitarian assistance contrasts from 21 studies covering low- and middle-income countries. Regarding the intervention or contrast type, most studies focused on UCTs, followed by food transfers, vouchers, CCTs and public works. There are on average 2.05 contrasts per study, ranging from two to four treatment arms (including the control group and studies without a pure control).⁸ Since one of the focuses of this review is the relative effectiveness of social assistance modalities, it is important to understand the underlying characteristics of each of the five types of interventions in a humanitarian setting.

UCT interventions (20). Unconditional cash transfers are by far the most common intervention type included in our review. Twenty UCT contrasts/interventions correspond to eleven studies--five in the Middle East (Lebanon and the Republic of Yemen), three in Asia (Fiji, Sri Lanka, and the Philippines), and three in Africa (the Democratic Republic of Congo and Niger). Four of these studies use random assignment without a pure control, while the remaining seven use quasi-experimental methods. Studies that use random assignment without a pure control directly compare different modalities of UCT (e.g., single payment vs. multiple payments), or they compare UCTs to food transfer programs or voucher programs. Programs that

⁷ We identified several important impact evaluation design characteristics such as: intervention category, target population, intervention duration, sample size, recipient identity, transfer schedule, payment type (multiple or single), total payment value, and cost per beneficiary, among others.

⁸ Several studies have also pooled their interventions (e.g., CCT, Voucher, and FT) and compared them to the control group. These cases are not included in the intervention categories.

use non-random assignment compare UCTs to the control group. This type of intervention is used more in conflict-affected settings (60 percent) than in natural disaster settings (40 percent).

Food transfer interventions (11). Food transfers are the second most common intervention type in our review. Eleven food transfer contrasts correspond to nine studies--four in Africa (Ethiopia, Mali, and Uganda), one in Asia (Sri Lanka), three in Latin America (Ecuador), and one in the Middle East (Yemen). Four of these studies use random assignment, one without a pure control (e.g., general food distribution vs. school feeding) and three with a pure control (e.g., food transfers compared to the control group). The remaining five studies used non-random assignment and contrasted food transfers with the control group. Food transfer interventions were more likely to be implemented in conflict-affected settings (67 percent), but some evidence exists in natural disaster settings.

Voucher interventions (5). There are five voucher interventions in this review that correspond to three studies--two in Africa (DRC) and one in Latin America (Ecuador). All these studies used random assignment (two with a pure control and one without a pure control), and they were all implemented in a conflict-affected setting.

CCT interventions (4). There are four conditional cash transfer interventions in this review that correspond to two studies--one in the Middle East (Yemen) and one in Latin America (Ecuador). CCT interventions are not very popular in humanitarian settings. Both studies used random assignment with a pure control, and they were only implemented in conflict-affected settings.

Public works interventions (2). There are only two public work interventions in this review (a cash-for-work intervention and a food-for-work intervention) that correspond to two studies--one in Africa (Ethiopia) and one in the Middle East (Jordan). Neither intervention used random assignment, and public works interventions were used equally in conflict-affected and natural disaster settings.

The humanitarian assistance interventions included in this review mainly targeted crisis-affected populations, such as internally displaced individuals, refugees, severely food-insecure households, households affected by natural disasters, etc. More than half of these humanitarian assistance interventions (60 percent) targeted the household head (both men and women), while

38 percent exclusively targeted adult women. Only one intervention targeted the primary caregiver of children aged 5–14. Most of these interventions were implemented in a rural setting, with only three being implemented in both rural and urban areas. Sample sizes varied between 252 households and 11,500 households, with an average of 2078. The duration of the intervention varied between four months and 24 months, with most of them being less than 12 months.

2.3.3 Outcome level

In this review, we classified all outcome measures as belonging to one of five broad categories: (i) basic needs (e.g., caloric intake or availability, the value of food consumed or food expenditure, dietary diversity, food insecurity, coping strategies, etc.); (ii) financial outcomes (e.g., livestock, nonfarm productive assets, farm productive assets, land, savings); (iii) gender (e.g., women’s empowerment, gender-based violence); (iv) human development (e.g., education outcomes, health and nutrition, labor force participation outcomes); and (v) social cohesion outcomes (e.g., social participation, trust in institutions, etc.).

To identify evidence gaps and applied research priorities, we consider a basic metric of the level of evidence as measured by the number of rigorous studies per outcome category following Gentilini (2016). Given the limitations of conducting research in humanitarian settings and the possible limitations to external validity, it is important to interpret these results with caution. To assess the relative level of existing evidence, we define as “substantial” the evidence base informed by more than ten rigorous impact evaluation studies in humanitarian settings. In cases where such a number is between five and ten, the evidence can be considered “emerging,” while if only a handful (fewer than five), it may be deemed “limited.” Where no evaluation evidence was available, evidence is clearly “absent”.

Table 5 presents the level of evidence across the different outcome categories. Overall, we find a wide range of evidence bases for humanitarian assistance programs across different settings. It can be argued that most evidence in humanitarian settings concentrates on basic needs outcomes, such as food security, food and non-food expenditure, and coping strategies. Therefore, the evidence base for basic needs outcomes can be classified as substantial relative to other categories. After basic needs, financial outcomes (which include asset ownership, income, and savings) are the second most reported outcome group. The evidence base for financial outcomes is emerging. However, less evidence exists on the impact of humanitarian assistance

programs on human development, such as education, health, economic opportunities (e.g., labor), and especially social cohesion and gender. For these outcome categories, the evidence base is limited. In particular, women’s empowerment and gender-based violence outcomes are some of the least explored impact measures of humanitarian assistance interventions.⁹ Given these findings, policymakers should carefully consider this unbalanced evidence base when deciding on interventions and reforms in humanitarian settings.

3. Main Results

This section explores the results of the twenty-one studies included in the review by five outcome categories. The first outcomes group is basic needs, which includes food security, food and non-food expenditures, and coping strategies. The second group is financial outcomes consisting of income, assets, and savings. The third group explores human development outcomes, such as education, labor-force participation, health, and subjective well-being. The fourth group includes gender-related outcomes such as gender-based violence and women’s empowerment. Lastly, the fifth group explores social cohesion outcomes.

3.1 Basic Needs Outcomes

Food security

Food security is the most reported outcome in the humanitarian assistance literature. Vulnerable populations in humanitarian settings often face high levels of food insecurity, which disproportionately affect households living in poverty. Children are particularly vulnerable to food insecurity, as adequate diets and nutritious foods are crucial for child development. In our review, we found twelve studies that reported effects of humanitarian assistance programs on household-level food security outcomes, nine of which compared the intervention to a pure control group. These studies used various ways to measure food security, ranging from its

⁹ In our review, twelve studies report outcomes on non-food expenditure, ten on food security, nine on food expenditure, nine on assets, seven on coping strategies, five on credit and savings, five on health, five on education, four on labor, four on social cohesion, four on women’s empowerment, three on income, two on subjective well-being, and one on gender-based violence. Some of the studies evaluated more than one outcome area, while others only focused on a particular outcome area. **Appendix Table 3** indicates what type of outcomes are reported in each study included in the review.

simplest form (e.g., number of meals eaten per day) to standard indicators (e.g., Household Dietary Diversity Score, Food Consumption Score, Food Insecurity Experience Scale).¹⁰

Most of the studies in our review find positive and statistically significant effects of humanitarian assistance programs on food security outcomes (Gilligan and Hoddinott 2007; Tusiime et al., 2013; Hidrobo et al., 2014; Bonilla et al., 2017; Kurdi et al., 2019; Tranchant et al., 2019; Chaaban et al., 2020; Quattrochi et al. 2020). Among these studies, four of them find improvements on Household Dietary Diversity Score (HDDS), although some of the coefficients are not statistically significant. The only exception is Lombardini and Mager (2019), who find that a cash-for-work intervention in a refugee camp in Jordan did not have any positive effect on food security.

Overall, these results suggest that most types of humanitarian assistance interventions have large impacts on food security outcomes in fragile and conflict-affected settings, not only through increased consumption but also through improved quality of diets and less severe experiences of food security. One limitation of the current evidence is that food security measures are mainly measured at the household level, which leaves a gap of knowledge regarding the intra-household distribution of food consumed and especially the food security situation among children.

Food expenditure

While food security is typically measured by looking at consumption and dietary patterns in food groups, one can look at the dollar expenditure on food purchases as a complementary measure of food security. Food expenditure can be defined as the amount of money spent on food in any given period. This measure can be particularly useful for people who purchase most of their food rather than produce it themselves. In our review, seven studies look at the impact of humanitarian assistance programs on food expenditure, four of which compared the intervention to a pure control group (Tusiime et al., 2013; Lehmann & Masterson, 2014; Kurdi et al., 2019; Tranchant et al., 2019).

¹⁰ For detailed descriptions on different indicators, see "[Data4Diets: Food Security Indicators](#)" from Tufts University Friedman School of Nutrition Science and Policy.

For cash transfer interventions, Lehmann and Masterson (2014) find that unconditional cash transfers (UCTs) to Syrian refugees totaling \$575 over five months increased food and water expenditure by \$25 per month relative to the control group.¹¹ Similarly, Kurdi et al. (2019) find that \$30 monthly CCTs in Yemen increased spending on non-staple food items. However, they find no impact of the intervention on total monthly spending.

In terms of food assistance interventions, Tranchant et al. (2019) examined the impact of a food assistance program in the form of general food distribution (GFD) and school feeding (SF) on food expenditure outcomes during conflict in northern Mali. They find that both GFD and SF increased monthly food expenditures by approximately 20 percent. In contrast, Tusiime et al. (2013) find that GFD of a WFP intervention in northern Uganda, which provided at least 40 percent of recommended dietary allowance, *decreased* food expenditure by 35 percent.

Overall, these findings suggest that in settings characterized by chronic food insecurity and among conflict-affected populations, UCTs and food transfers can positively impact the food expenditure of vulnerable populations.¹² It also suggests that food expenditure alone is not the best measure of food security; the impact on food expenditure can be positive or negative depending on the intervention type. For example, food expenditure may decrease when direct food transfers are provided to recipients as there is less need to purchase food with their own money. At the same time, expenditure may increase if they spend more on nutritious foods rather than calorie-based staple foods. When the type of aid is cash, it is most likely to increase food expenditure if they were previously food insecure.

Non-food expenditure

While food security may be the priority in social assistance, people in emergencies also need better clothing, housing, health, and education. Housing and health are especially important for those injured and whose homes are damaged by natural disasters. In our review, non-food expenditure is, in fact, the most reported outcome with twelve studies in total. In general, most studies with a pure control find that humanitarian assistance recipients significantly increased

¹¹ In the winterization cash assistance program for Syrian refugees in Lebanon, both the treatment and control group also received a restricted food voucher of approximately \$30 per person per month. In this review, we focus on the winterization cash transfer of \$575 which was received only by the treatment group.

¹² These effects on food expenditure are similar to those in the general literature on social protection. For example, a recent meta-analysis of social assistance programs including 48 studies of 39 social protection programs found that transfers increased monthly food expenditure by 17 percent on average (Hidrobo et al., 2018).

non-food expenditure, including clothing, heating supplies, housing material, education, health expenses, school fees, agricultural inputs, and assets (Quattrochi et al., 2020; Hidrobo et al., 2014; Lehmann & Masterson, 2014; Hidrobo et al., 2016; Bonilla et al., 2017; de Hoop et al., 2019; Tranchant et al., 2019; Chaaban et al., 2020). Only Tusiime et al. (2013) find no impact of food transfers on non-food expenditure in Northern Uganda in a conflict setting.

Similar to the food security outcomes, these results also suggest that various modalities of humanitarian assistance programs effectively improve non-food expenditure compared to the control group, with UCTs having the greatest impact. Since humanitarian assistance interventions – either cash or in-kind – constitute an increase in real income, it is expected that some of that extra income is spent on non-food consumption whenever the local markets for these items are available in these fragile contexts.

Coping strategies

Many food-insecure households employ various strategies to cope with a lack of food and income. In the humanitarian context, coping mechanisms are typically used in reference to the negative or harmful strategies individuals or households use in difficult economic situations that may produce longer-term negative consequences. Economic-related coping strategies may include skipping meals, selling productive or non-productive assets, and being forced to move, while employment-related coping strategies may include child labor, family separation, sexual exploitation, among others. Seven studies in our review report on the use of coping strategies in humanitarian settings, covering mostly conflict-affected populations in DRC, Mali, Niger, Uganda, Lebanon, and Yemen.

Overall, four out of seven studies with a pure control find that humanitarian assistance beneficiaries switch to better coping strategies (Tusiime et al., 2013; Lehmann & Masterson, 2014; Bonilla et al, 2017; Schwab, 2019), one study finds no effect (Quattrochi et al., 2020), and two studies reports mixed results (Aurino et al., 2019; Kurdi et al, 2019).

For instance, Lehmann and Masterson (2014) examined the effects of an unconditional cash payment to support Syrian refugees living in Lebanon to support them in the winter months. They find that Syrian refugees who received the winterization cash assistance were less likely to reduce meal frequency and portion size. Notably, treatment households were 50 percent less

likely to have their children work and sell their productive assets.¹³ Bonilla et al. (2017) find that unconditional cash transfers to vulnerable displaced households in Eastern DRC reduced the percentage of households skipping medical treatment due to lack of money. Similarly, Schwab (2019) finds that both food and cash transfers decrease child farm labor in the context of the Yemen civil war. Lastly, Tusiime et al. (2013) find that food aid during conflicts in Northern Uganda decreased the likelihood of selling poultry and other livestock. This study also finds that the effect is driven by male-headed households, which requires further investigation.

It is important to note that some types of humanitarian assistance may increase child labor as a coping strategy. Aurino et al. (2019) assessed the impacts of an emergency school feeding program and a general food distribution program among children in northern Mali during political and economic turmoil and violent conflict. They find that general food distribution *increased* the likelihood of children, especially boys, participating in farm labor or housework during the conflict in Mali, while school feeding led to lower participation and time spent in work among girls.

3.2 Financial Outcomes

Assets

Asset ownership, an indicator of household economic status, is one of the most reported outcomes in the humanitarian response literature. Ten studies examined the impact of humanitarian assistance programs on asset outcomes (seven with a pure control group and three without a pure control group). These studies report several asset measures ranging from livestock (e.g., own cattle, poultry), non-farm productive assets (e.g., household assets), farm productive assets (e.g., tractors, knapsack sprayer, hand mill, etc.), and land ownership.

Although one study in our review finds a significant reduction in asset ownership (Gilligan and Hoddinott 2017), most of the studies find that humanitarian assistance programs increase asset ownership during emergencies (Lehmann & Masterson, 2014; Bonilla et al., 2017; Lombardini & Mager, 2019; Schwab, 2019; Ivaschenko et al., 2020; Quattrochi et al., 2020). For

¹³ A more recent study by Özler et al (2021) evaluate the impact of the Emergency Social Safety Net (ESSN) program in Turkey, which is the largest unconditional cash transfer program for international refugees in the world. They find that this humanitarian assistance program caused substantial increases in the food consumption score and reduced the use of negative coping strategies for Syrian refugees, especially in the short run.

instance, Lehmann and Masterson (2014) find that Syrian refugees in Lebanon who received labeled cash transfers intended for “winterization” were more likely to own ovens and heaters than households in the control group. Similarly, Schwab (2019) finds that recipients of cash transfers during the Yemeni civil war increased their livestock assets by 15 percent relative to non-recipients, the equivalent of a sheep or goat. Unconditional cash transfers are effective at increasing assets not only in conflict settings but also following natural disasters. For example, households in Fiji who received cash assistance following the 2016 Tropical Cyclone Winston were 13–26 percentage points more likely to recover from the cyclone’s damage, and the effectiveness of those transfers increased in the presence of a functioning local market (Ivaschenko et al., 2020).

There is also evidence that cash voucher interventions for non-food items and cash-for-work can also increase asset ownership and household wealth. In particular, Quattrochi et al. (2020) find that recipients of asset vouchers in eastern DRC had increased assets by 0.16 standard deviations compared to the control group. Similarly, Lombardini and Mager (2020) find that households involved in cash-for-work activities increased their wealth significantly more than the control group.

Conversely, Gilligan and Hoddinott (2007) find that providing emergency food aid in the form of food-for-work to individuals who suffered from the 2002 severe drought in rural Ethiopia led to a negative and statistically significant effect on the growth of livestock holdings. One potential explanation for this decrease in livestock is that program participants may have had to increase their food consumption to meet higher food energy requirements derived from participating in public works. If these food requirements were large enough, program participants might have needed to draw down their livestock assets to meet their food needs.

Credit and savings

Compared to asset ownership, a smaller number of studies reports impacts on credit and savings. Only six studies looked at the impact of humanitarian assistance programs on credit and savings (four with a pure control group and two without a pure control group). In these studies, outcomes are expressed mainly in terms of whether the household had any savings, loans/debts, or the total monetary value of the savings.

Overall, this evidence is too inconclusive to be able to draw any lessons. On the one hand, cash transfer programs in conflict settings have not led to statistically significant effects on savings or loans (Lehmann & Masterson, 2014; Schwab, 2019). For instance, levels of debt following the winterization cash transfer program for Syrian refugees in Lebanon (US\$575 transfer value) were statistically similar in treatment and control households at US\$500 and US\$513 in outstanding loans, respectively. In contrast, Quattrochi et al. (2020) find increased debt among Syrian refugees who received vouchers for non-food items. However, the authors note that the effect may indicate either greater access to credit or increased borrowing to meet daily needs. In the same line, Bonilla et al (2017) find that unconditional cash transfers of \$120 to vulnerable households in Eastern DRC, increased the percentage of households with any savings and average savings, decreased the percentage of households with any debt but *increased* the average debt.

Income

Measuring household income, especially in a humanitarian setting, can be very challenging since self-reported measures of total income generally suffer from recall bias, increasing the margin of measurement error. In addition, this outcome is also regarded as unreliable given the wide variety of income-generating activities that vulnerable populations engage in during a humanitarian crisis. In this review, only three studies report effects on income (two with a pure control group and one without a pure control group).

Keeping in mind measurement limitations, cash-for-work (CFW) interventions can improve income in humanitarian settings. For instance, Lombardini and Mager (2020) analyzed the effects of a cash-for-work (CFW) program that provided temporary employment in public projects to Syrian refugees in a Jordanian refugee camp. They find that households with at least one member engaged in CFW in the previous 12 months reported income on average 23 percent higher than comparable households in the camp, and they were 19 percentage points less likely to engage in income-generating opportunities other than CFW. On the other hand, Quattrochi et al. (2020) assessed the impact of providing non-food vouchers ranging from US\$55– US\$90 per household to displaced and conflict-affected populations in eastern DRC and finds that this type of intervention did not have a significant effect on household income.

3.3 Human Development Outcomes

Education

Across many of the world's poorest countries, armed conflict continues to destroy not just school infrastructure, but also the hopes and ambitions of a whole generation of children. Therefore, it is critical to strengthen human capital development not only during sudden onset crises but also during slow-onset crises, in addition to ensuring basic needs like food. While direct interventions targeted to improve human capital are desired, in humanitarian settings, simple cash and food transfers could also affect outcomes like education and economic opportunities. We found six studies that report impacts of humanitarian assistance programs on children's education outcomes, covering mainly conflict-affected populations in DRC, Lebanon, and Mali (all with pure control groups). There is no comparative impact evaluation that contrasts different modalities in attaining educational goals.

Four of the six studies find that UCTs have a positive and statistically significant effect on children's education. First, Chaaban et al. (2020) find that unconditional cash transfers over 4–22 months had a very large effect (10–30 percentage points) on the enrollment rate of Syrian refugees in Lebanon. Second, Lehmann and Masterson (2014) find children who received the winterization cash transfer intervention in a refugee camp setting in Lebanon were six percentage points more likely to be enrolled relative to the control group. The authors argue that this positive effect was driven by an improvement in parent's ability to cover transport costs and school expenditures. Third, de Hoop et al. (2019) find that displaced Syrian children who received the *No Lost Generation* cash transfer program (US\$20– US\$65 monthly transfer value) were not more likely to be enrolled in school, citing the supply-side capacity constraint of schools as the main reason behind this result.¹⁴ However, the study finds positive and statistically significant effects on school attendance among children who enrolled in school and were benefitting from the cash transfer program. They also find that the program significantly increased children's desire to complete primary and secondary schools. Moreover, total education expenditure increased by almost 54–70 percent. Fourth, Bonilla et al. (2017) find that internally displaced households in Eastern DRC that received a \$120 unconditional cash transfer were more likely to enroll their

¹⁴ The Lebanese public school system incorporated vast numbers of Syrian children in a short time, and, as a result, many schools reached full capacity. The enrollment rate for children aged 5–9 was already high at 91 percent.

children in school, especially boys. These findings highlight the potential of UCTs to make a difference in access to education for displaced children from conflict settings and the need to coordinate demand-side and supply-side interventions in settings of conflict displacement.

The remaining two studies that look at education outcomes did not find positive impacts. For instance, Quattrochi et al. (2020) find that providing cash vouchers for non-food items to displaced and conflict-affected populations in eastern DRC did not substantially improve school attendance of children aged 5–18. Lastly, Aurino et al. (2019) caution that well-intended programs might have unexpected results by distorting the incentives of households. The authors examine the impact of two types of food transfer (FT) on children’s education outcomes during conflict in Mali: emergency school feeding and general food distribution (GFD). They find that, while on-site school meals increased school enrollment by ten percentage points and years of schooling by half a year, general food distribution led to a 20 percent *decline* in school attendance over five years, especially among boys. A finding that boys spent more time on farm activities and other household work suggests that there may be an important trade-off between children’s education and labor constraints faced by households.

Overall, the evidence from this review suggests that humanitarian assistance programs can be effective in supporting children’s educational outcomes if the transfer is sufficiently large to offset the opportunity costs of schooling – which are particularly high during crises – and if there are no major supply-side constraints. Moreover, successful approaches to humanitarian assistance in terms of education outcomes need to be tailored to the specific context in which the crisis takes place. For instance, opportunity costs of schooling may be larger for adolescent boys, if they are involved in farm work or if schools are perceived as targets of armed conflict, while insecurity and violence may affect girls’ access to school if households perceive that girls are more likely to be targets of violence.

Economic opportunities and labor

In theory, the effects of social assistance on labor are ambiguous. A standard economic model predicts that an increase in unexpected unearned income can induce an individual to work less to enjoy more leisure. On the other hand, additional assistance could incentivize individuals to work more by making them more productive and/or alleviating credit and insurance constraints, e.g., expanding their business and making riskier investments. The extra assistance

could also help with job search activities (Baird et al., 2018). In our review, four studies report on the effects of humanitarian assistance programs on labor outcomes covering mainly conflict-affected populations in Ecuador, Lebanon, and Yemen.

The evidence on labor force participation is inconclusive and mixed. For instance, Lehmann and Masterson (2014) find that unconditional cash transfers reduced the number of days worked by recipient households in a refugee environment, suggesting that humanitarian assistance may decrease the incentive to work. Consistent with this finding, Chaaban et al. (2020) find that long-term unconditional cash transfers reduced employment from 53 percent to 36 percent among Syrian refugees, while they find an increase in the percentage of unemployed men seeking work with better employment conditions. Conversely, the long-term unconditional cash transfer gave women the option to leave the labor force and avoid low-paying jobs they would have otherwise had to take part in. Overall, the findings suggest that refugees might face undesirable or hazardous working conditions which they can afford to avoid by being more selective in job searches or just dropping out of the labor market only when cash assistance is available. In contrast, Schwab (2019) finds that those who received food and cash transfers were more likely to do off-farm paid work among households living in the vicinity of the Yemen civil war.

Finally, Hidrobo et al. (2016) suggest the importance of gender dynamics when looking at the effects of humanitarian assistance transfers on labor. They evaluated equivalently valued monthly transfers of \$40 (in the format of food, vouchers, or cash) targeted at women and investigated how labor participation changes for both women and their partners among Colombian refugees and poor Ecuadorian households. The authors find no impacts on participation and working hours on agriculture and non-agricultural work for both the women and their partners. The null effect of female-targeted transfers, compared to other studies, suggests that female and male beneficiaries may have different preferences over consumption and labor and face different labor market conditions.

Health and subjective well-being

Emergency environments tend to be chaotic and are often characterized by the collapse of public service delivery, including water, sanitation, and health care. In such environments, health or human welfare may deteriorate rapidly. Humanitarian assistance programs can be a powerful

tool for mitigating the negative consequences of this type of crisis. In our review, five studies examined the impacts on health outcomes ranging from children’s anthropometric measures (e.g., height-for-age, weight-for-height, and mid-upper arm circumference), instances of diseases (e.g., malaria and diarrhea), and mental health, to behavior changes and nutrition knowledge, as well as access to water and health care.

In our review, three out of five studies find significant positive effects on most health outcomes, while the remaining two studies do not find any significant effects. For instance, Ecker et al. (2019) find that providing unconditional cash transfers (UCTs) to conflict-affected households during the civil war in Yemen significantly improved children’s anthropometric outcomes (measured as weight-for-height z-score and mid-upper arm circumference z-scores). Similarly, Chaaban et al. (2020) find a significant improvement to a broad range of health outcomes among Syrian refugees in Lebanon due to participating in an unconditional cash transfer program.¹⁵ Lastly, Kurdi et al. (2019) find that a conditional cash transfer (CCT) program during the civil conflict in Yemen led to a significant decrease in child malnutrition.

On the other hand, evidence on the effectiveness of vouchers and food transfers is limited. Quattrochi et al. (2020) find an insignificant positive effect of non-food item vouchers on weight-for-height z-scores, and they did not find any impact on mid-upper arm circumference. Similarly, Tranchant et al. (2019) find an insignificant negative effect of food aid on the height of children aged 2–5. These findings suggest either that vouchers and food transfer interventions might not be very effective at improving children’s anthropometric outcomes, or that detecting changes to height and weight requires a larger sample to improve statistical power.

Lastly, we found two studies that reported on subjective well-being. Quattrochi et al. (2020) find large positive effects of non-food item (NFI) vouchers on the mental health of displaced and conflict-affected adults in eastern DRC. This positive effect appears to be driven by higher levels of well-being (measured by the WHO scale) and life satisfaction (measured by the question, “All

¹⁵ The authors find a significant increase in the access to safe drinking water by 15–30 percentage points on a base of 67 percent for the control group. Moreover, cash beneficiaries reported that their access to primary healthcare improved and their need for hospitalization decreased. Cash support presumably improved their ability to cover healthcare costs and other indirect costs such as transportation costs. Importantly, the authors find that 55 percent of those who received cash over a longer period (more than 12 months) reported better mental health (measured using Mental Health Inventory–MHI-5), relative to 18.5 percent in the control group. However, similar effects were not detected for those who received cash over a short period (less than 12 months).

things considered, how satisfied are you with your life as a whole these days on a scale of 1 to 10?”). In the same line, Lombardini and Mager (2020) report the impact of a cash-for-work (CFW) program on subjective well-being for Syrian refugees in Jordan. The questions they used included whether respondents feel they positively contribute to their family and whether they feel satisfied with their lives. They find three positive coefficients among the four questions, but only one of them is statistically significant. Given the lack of evidence on this type of outcome, this is an outcome area where more evidence would be useful.

3.4 Gender Outcomes

Gender outcomes are less explored in humanitarian assistance. Even outside of humanitarian settings, the evidence on policies and programs that effectively reduce gender-based violence and empower women in the developing world is scarce, and there is still no consensus on theories and mechanisms. While it is often assumed that improving the economic situation of women and ensuring they have an equal share of resources within their households will alleviate gender-based violence and potentially also empower and give them more decision-making in the household, research has also shown that this is not always the case. In particular, concerns have been raised that cash transfers could disadvantage women by reducing their control over assistance in the household. In this review, we found five studies that report on the impact of humanitarian assistance programs on gender outcomes. In particular, four studies report on women’s empowerment (three with a pure control and one without a pure control), while only one study reports on gender-based violence.¹⁶

Similar to the link between cash-based interventions and women’s empowerment in the broader literature, the evidence is also ambiguous when focused on humanitarian settings. For example, on the one hand, Kurdi et al. (2019) show that conditional cash transfers as part of the Yemen Emergency Crisis Response Project improved women’s empowerment. In particular, treated women were more likely to report taking their child alone to the health center and having higher aspirations for their daughters’ education. On the other hand, Lombardini and Mager (2020) find that Syrian refugee households involved in CFW activities in Jordan had a higher proportion of women engaged in income-generating activities. However, they find no evidence

¹⁶ In these studies, women’s empowerment is measured through indicators such as women’s decision-making power and attitudes toward gender roles.

that cash-for-work (CFW) improved gender equality outcomes.¹⁷ Relatedly, Hidrobo et al. (2016) show that refugee and poor women who received cash, vouchers, and food transfers as part of a program designed to reduce poverty and food security in northern Ecuador were more likely to spend more time engaged in domestic labor, which may be interpreted as there were fewer opportunities for women to spend time outside of the home.

Hidrobo et al. (2016) is the only study that exclusively focuses on the impacts of humanitarian assistance on gender-based violence. The authors show that equally valued transfers of cash, voucher, and food targeted to Colombian refugee women significantly decreased controlling behaviors and physical/sexual violence compared to the control group. When examined by individual modality, they find that food transfers reduced physical or sexual violence, cash reduced controlling behaviors, and vouchers reduced controlling behaviors and physical or sexual violence. However, these differences across modalities are not significantly different from each other.

3.5 Social Cohesion Outcomes

There is still no consensus in the literature on the definition of social capital or social cohesion and how to measure them. In this review we focus on proxies for the characteristics of social relations in a certain community, including cooperation and solidarity between groups and individuals, trust in individuals, lack of discrimination, confidence in institutions, and agency.¹⁸ We found four studies that examined the impacts of humanitarian assistance programs on social cohesion (three with a pure control and one that compared different modalities), covering mainly conflict-affected populations in DRC, Ecuador, and Lebanon.

Despite the limited evidence on social cohesion, the few studies that report this outcome suggest that humanitarian assistance programs can effectively promote social capital during a

¹⁷ Lombardini and Mager (2020) show that individuals involved in CFW activities were less likely to report that men should support with care work in the home compared to individuals in the control group. However, this is not surprising given that the intervention was not targeted for women, and 80 percent of the respondents were men.

¹⁸ The concept of social cohesion carries different connotation depending on the context, identity, culture and social and political dynamics. Even though these definitions often respond to the policy needs and the particular interest of agencies and institutions, they are generally linked to the wider scope of democratic governance including human rights and social accountability. For instance, the Council of Europe, one of the major contributors to the conceptualization and measurement of social cohesion, defines social cohesion as “a society’s capacity to ensure the well-being of all its members by minimizing disparities and avoiding marginalization; to manage differences and divisions and to ensure the means of achieving welfare for all” (Council of Europe, 2004, p. 3)

humanitarian crisis. For instance, Lehmann and Masterson (2014) find that cash transfer recipients in a refugee camp in Lebanon had significantly fewer disputes among household members. They also find that the relationship between Syrian refugees and Lebanese community members improved, as measured by social interactions in providing and receiving help. Relatedly, Quattrochi et al. (2020) measured the effect of non-food vouchers on social cohesion in DRC based on contributions to other households, contributions to the village, conflicts with other households, trust, and incidences of theft. They find a positive effect on the contributions to the village, but there were no effects on other measures of social cohesion. Similarly, Valli et al. (2019) show that equally valued transfers of cash, vouchers, and food targeted to Colombian refugees in Ecuador improved outcomes on personal agency, attitudes on diversity, confidence in institutions, and social participation. However, the program did not have any effects on social cohesion among Ecuadorian participants.¹⁹

Even though the included studies in our report find positive effects on social cohesion, it is important to note that humanitarian assistance programs--in-kind or cash--might also have negative effects by increasing social tensions when certain groups, notably refugees, are provided with a cash transfer that is unavailable to host communities. To alleviate such tensions, interventions in humanitarian settings that aim to improve social cohesion outcomes could either include host communities as beneficiaries or sensitize them to the benefits of cash programs targeting refugees.

3.6 Cost Analysis

The types of interventions used by studies in this review can be broadly grouped into cash transfers and food transfers. Cash is handed out manually or delivered as mobile money and/or cash vouchers. Similarly, food is distributed as an in-kind transfer (individually or through schools) or as a voucher that can be exchanged for food in shops or at organized fairs. As humanitarian budgets are limited, a key question is whether one delivery method is more cost-effective than others for equivalently valued transfers.

¹⁹ The authors suggest that participating in the nutrition and health training sessions, as well as the program messaging around inclusiveness, might have contributed to the observed rise in social cohesion.

Assessing cost-effectiveness requires estimating total returns on a range of short-term and long-term outcomes, including food security, income, expenditure, health, and education. Depending on the goals and budget constraints of the study, it is not necessary (and is, in fact, difficult) to measure all outcomes. For example, outcomes such as intimate partner violence, empowerment, and subjective well-being are difficult to quantify, and therefore aggregating the returns across outcomes is challenging. Quantifying all costs that go into delivering programs is equally challenging, especially when multiple organizations provide resources with different or no accounting systems. Identifying and valuing non-monetary items such as volunteers' time and people involved in the programs is not straightforward either. Only four out of twenty studies report the implementation costs of different transfer modalities with equivalent monetary values. Due to the lack of evidence, it is not possible to conclude which type of assistance is most efficient in terms of the cost of delivery.

First, Aker et al. (2011) find that the total program cost of manual cash transfers is 7 percent lower than the cost of mobile money transfers. One important consideration is that the comparison depends on the frequency of transfers. Given that mobile money transfers require higher fixed costs upfront to open and set up the mobile money accounts, the average cost of each transfer will be lower with a higher number of transfers. Furthermore, the authors find that recipients in the mobile money transfer group benefited from reduced opportunity costs of their time which is not adequately considered when comparing the implementation cost. Overall, they conclude that the additional benefits from the mobile money transfer outweigh the small cost increase.

The other three studies compare the costs of other types of interventions (but not mobile money), and argue that cash transfer method is the most economic intervention to implement. Sandström and Tchatchua (2010) find that cash transfer is at least 5 percent cheaper to implement than food transfer. Similarly, Aker (2017) finds the per-recipient implementation cost is 8 percent less for cash transfer than voucher transfer. Hidrobo et al. (2014) compare all three modalities and find that cash transfer is 9 percent cheaper than voucher transfer and 75 percent cheaper than food transfer.

In summary, Aker et al. (2011) suggest that mobile money cash transfer can be the most efficient provided that mobile network infrastructure is available, and it is convenient and clear

enough for beneficiaries to withdraw and transfer the mobile money for their use. The remaining few studies agree that manual cash delivery has a lower implementation cost for delivering equally-valued transfers than voucher transfer, with food transfer being the most expensive way to deliver assistance.

Without accurate cost data about alternative program designs and delivery modalities, we may be recommending policies and programs that countries cannot afford or that are not worth scaling up. Only by knowing the effectiveness and costs of an intervention can policymakers make informed decisions about allocating scarce resources. Unfortunately, most studies in this review report very little on operational aspects, mechanisms, and cost per beneficiary, focusing mostly on treatment effects. For this reason, to improving the reporting on cost-effectiveness it would be desirable if future work would include financial data from budgets and spending reports that are disaggregated, intervention-specific and captured in real time over the course of an intervention. Cost estimates must include the comprehensive set of inputs for program delivery, which means that non-financial information may also be relevant. This can come from monitoring and evaluation data, interviews with program implementers and exercises like time-effort tracking. Lastly, cost data must be captured in real time during program implementation since collection data at project close may result in inaccurate or missing data (World Bank, 2019).²⁰

4. Comparative Performance of Transfer Modalities

The decision on the types of transfers (e.g., cash, voucher, vs. food) and the delivery mechanisms (e.g., mobile money vs. cash-in-envelope, or lump sum vs. multiple transfers) involves multiple factors. First, the condition of market functioning needs to be assessed. As is the case in many humanitarian settings, missing markets can undermine the effectiveness of cash transfers if there are limited opportunities to use the cash transfer. Second, the existing physical and financial infrastructure needs to be taken into account. These different modalities require delivery systems for getting them to their intended beneficiaries. The system may vary from staff traveling to communities distributing manual cash or goods, to payment service providers such

²⁰ A good example for collecting costing data is the World Bank's [Partnership for Economic Inclusion's Costing Dashboard](#), which reports and compares costs of economic inclusion policies. This type of tool could be used as a framework to also collect costing data for cash and in-kind programs in humanitarian settings. Hendren and Sprung-Keyser (2020) have also developed a unifying framework to compare the effectiveness of different policies and interventions, which relies mainly on understanding the long-term impact of policies as well as knowing the implementation cost.

as post offices disbursing cash over the counter, to electronic mechanisms such as transfers by mobile phone or directly into bank accounts. In particular, conflict and rapid-onset natural disasters can disrupt payment systems, damage infrastructure, and displace people and businesses. Delivering cash digitally may not be the most effective delivery method if the cost of cashing it out is high for villagers in remote areas with poor road conditions. Third, the selection of food items matters. If the in-kind food items are *infra-marginal* (the consumption quantity even without transfer is greater than the quantity provided), in-kind will have little to no distortion effects. On the other hand, if some food items are provided more than households would consume, then in-kind transfers can be distortionary in a sense it might induce households to consume more food items than they desire, or those food items may go waste if they are not easily storable.

Recognizing that the effectiveness and efficiency of cash largely depend on context-specific factors like the availability of financial service providers, functioning markets, and security, humanitarian actors have committed to increasing the use of cash (instead of, or in addition to, in-kind) whenever feasible (UNOCHA 2017). Reasons for cash preference include ethical motivations, as it is generally believed to respect beneficiary preference, empowering them to address their own needs by affording them more choice in local markets. On the other hand, governments may prefer in-kind transfers under the assumption that households may be short-sighted and spend money for immediate gratification (Hanna and Karlan 2017), or they may not take into account social benefits when making individual decisions. Nonetheless, donors and practitioners continue to call for additional evidence from the humanitarian space on how the benefits and impacts of cash-based transfers compare to in-kind, with an eye to outcomes regarding risk and cost-effectiveness (HLPFH 2016).

In this section, we examine the impact evaluation studies that have deliberately compared the relative effectiveness of alternative transfer modalities according to different dimensions of outcomes. A summary of the impacts is presented in **Table 6**, which displays the most effective transfer modality according to different outcome dimensions.

4.1 Basic Needs Outcomes

We found six studies that report the most effective modality in terms of basic needs outcomes, such as food security, food expenditure, non-food expenditure, and coping strategies.

Food security. Even though food security is one of the most explored outcomes in humanitarian settings, the debate over the most effective modality in improving food security outcomes remains inconclusive. When comparing different modalities of transfers, the data show that, on average, cash and in-kind transfers are similarly effective in improving overall food security. Certain differences among cash and in-kind transfers are not very significant and depend on the indicator used to measure them. For instance, one of the most used indicators is food consumption. Hidrobo et al. (2014) used a randomized controlled trial to assess the impacts of cash (CCT), food vouchers, and food transfers in a refugee camp in Ecuador, and they find that all three modalities significantly improved the quantity and quality of food consumed. However, while the impacts on food consumption were larger for food-receiving beneficiaries relative to both cash and voucher transfers, they were not statistically significant.²¹ On the other hand, Aker (2017) did not find any significant differences in food consumption between food vouchers and cash, partly because voucher households could resell part of what they had purchased. However, Aker (2017) also noted that food transfers were distorting because those receiving cash spent more money on health and education items.

Another indicator that provides information on the impact on food security at the household level is caloric intake. In contrast to food consumption, food transfers tend to have a larger impact on caloric intake relative to cash in most contexts. For example, in Ecuador, Hidrobo et al. (2014) find that food transfers led to a significantly larger increase in consumed calories (relative to cash transfers) mainly due to larger increases in consumption of cereals (41 percent of households' caloric intake). A potential mechanism behind this effect is a change in diet, where cash beneficiaries shift from highly caloric foods to a diverse diet, including eggs, milk and dairy, vegetables, meat, etc.

Lastly, to analyze the quality of consumption patterns and diets, another indicator used in the literature is dietary diversity (e.g., dietary diversity index, food consumption scores, and household dietary diversity score). In the humanitarian literature, results are mixed. On the one hand, Hidrobo et al. (2014) find that vouchers led to significantly larger increases in dietary

²¹ Evidence from the development literature on the relative effectiveness of cash versus food indicates that impacts on food consumption are higher for cash than for food beneficiaries (Ahmed, et al. 2010, Barker, Filmer and Rigolini 2014, Cunha 2014). In the case of Ahmed et al. (2010), who compared the relative effectiveness of cash and food transfers to the ultra-poor in Bangladesh, one potential explanation is that the size of the cash transfer was significantly higher than the food transfer.

diversity (relative to both cash and food transfers). This effect was mainly due to larger increases in the number of days consuming vegetables, eggs, milk, and dairy. Similarly, Sandström and Tchatchua (2010) find that those receiving cash increased dietary diversity by consuming more meat, dairy products, and processed foods (relative to the food transfer group), but the differences are quite small. On the other hand, Aker (2017) finds that dietary diversity was similar across food voucher-receiving households and cash-receiving households.²²

This literature also examines different modalities of delivering cash (mobile vs. manual). For instance, Aker et al. (2011) compared the effect of mobile money cash transfers and manual cash transfers. They found that those who received mobile money transfers increased dietary diversity (as measured through HDDS) more than those who received cash manually. The authors suggested that this may be due to lower transaction costs and greater privacy.

Food expenditure. Two studies examined the impacts of different modalities of transfers on food expenditure. Sandström and Tchatchua (2010) randomly assigned beneficiaries into cash transfer and food transfer groups during WFP operations in Sri Lanka. They find that total food expenditure was similar for both groups, but cash households spent more on meat, dairy products, and processed foods and less on rice and wheat, relative to food transfer households. In contrast, in DRC, Aker (2017) finds that total weekly food expenditures were 13 percent lower for households receiving cash than those receiving food vouchers. This was largely because vouchers were commodity-based. Once again, the data shows mixed results for cash and in-kind transfers, suggesting that their effectiveness is similar on average.

Coping strategies. There is limited evidence on how coping strategies are differentially affected by different transfer modalities. For this outcome group, the data also show that in-kind and cash transfers have similar effectiveness. For instance, Schwab (2019) finds that cash transfers and food transfers did not have any significant difference on child labor during civil unrest in

²² The findings in non-humanitarian settings are also consistent. For example, Skoufias et al. (2008) evaluated randomized cash and in-kind transfers of Mexican government's food assistance program, the *Programa de Apoyo Alimentario* (PAL), and find similar effects on food and total consumption. Using the same program, Cunha (2014) reaches the same conclusion and explains that it is because the in-kind food transfers of this program were infra-marginal in terms of *total* food consumption. However, he also noted there was a large variation in over- or under-consumption across the ten items provided (e.g., bean transfer amounts were smaller than consumption needs, while milk powder was provided significantly more than consumption needs). One exception to this overall literature is Hoddinott et al. (2018), who find that households randomized to receive in-kind transfers in Niger had higher increases in food consumption score (FCS) and dietary diversity relative to the cash group.

Yemen. Similarly, Aker et al. (2011) did not find any differences between mobile money transfers and manual cash transfers on coping strategies measured by selling land and cutting trees. These studies do not include conventional coping strategies, including reducing the portions of meals, working as a casual laborer, selling livestock, or borrowing. Therefore, more evidence on this outcome would be particularly useful.

Non-food expenditure: Similar to the previous basic needs outcomes, six studies in our review compare the effectiveness of different modalities on non-food expenditure. In this case, there is some suggestive evidence that unconditional cash transfers increase non-food expenditure more than other types of interventions, but overall the evidence is still inconclusive (Sandström & Tchatchua, 2010; Aker, 2017; Schwab, 2019).

The initial findings from the literature on basic needs outcomes are threefold. First, for food security, the effects are similar across modalities. Therefore, it might be useful to consider other factors when determining the type of transfer, such as implementation cost, presence of functioning local markets, and, importantly, beneficiary preference. Second, the specific types of food consumed are different depending on the food basket provided, restrictions placed on food vouchers, and the availability and prices of food items in local stores. It is possible to make specific food items more accessible and affordable to increase the intake of specific micronutrients. Third, cash tends to increase non-food expenditures such as clothing or agricultural inputs. Assuming households know how to best spend their money, this suggests that in-kind transfers could be distortionary.

4.2 Financial Outcomes

Evidence from a direct comparison of cash versus in-kind transfers within the same intervention in humanitarian settings is more limited for this outcome category. In our sample, three studies assess the relative effectiveness of different modalities on financial outcomes. Two evaluated different unconditional cash transfer modalities in Niger and the Philippines (Aker et al., 2011; Mercy Corps, 2015), while one compared cash transfers and vouchers in a refugee camp setting in the DRC (Aker, 2017).

Asset ownership. Following Typhoon Haiyan in the Philippines in 2013, households who received unconditional cash transfers in a lump sum (single payment) had more productive assets

compared with households that received three payments (multiple payments) of the same amount (Mercy Corps 2015). In Niger, Aker et al. (2011) find that households who received cash transfers through mobile phones had more non-durable assets than those who received manual cash, though there was no difference in durable asset ownership. The study suggests that households receiving mobile transfers are less likely to sell non-durable assets (e.g., lamps and flashlights) less frequently than those receiving manual cash transfers. Lastly, Aker (2017) finds no difference in asset ownership between households receiving cash vs. vouchers in a refugee camp setting in DRC.

Savings. Regarding the relative effectiveness of different modalities on savings, Mercy Corps (2015) evaluated several unconditional cash transfer modalities in a natural disaster setting. Following Typhoon Haiyan in the Philippines, Mercy Corps' cash transfer program compared four UCT treatment arms: (i) a lump sum cash transfer, (ii) a multiple payment cash transfer, (iii) a multiple payment cash transfer plus a financial literacy training, and (iv) a multiple payment cash transfer plus a financial literacy training and savings encouragements through messages. First, the authors find no evidence that the lump sum and the multiple payment disbursements were different when it came to encouraging savings behavior. Second, for households that received multiple cash payments, the addition of the financial literacy training component did not have any effect on savings behavior. The authors note that one-off trainings often included in relief efforts are likely insufficient to affect financial behaviors, but that as communities move forward with recovery, ensuring that households have access to the benefits of financial products will play a role in accelerating improvement and reducing vulnerability. Third, for households that received multiple cash payments and the financial literacy training, also receiving nudges through voice messages to encourage saving led to a statistically significant increase in the usage of both informal and formal savings products among beneficiaries who reported receiving the messages, suggesting that nudges can be a powerful tool for improving savings behavior in a humanitarian setting.

On the other hand, Aker (2017) compared the effectiveness of unconditional cash transfers and vouchers in an informal camp for internally displaced persons in the DRC. The author finds that households receiving cash transfers saved slightly more during the intervention than households receiving vouchers. Similarly, 9 percent of households receiving cash had savings at endline compared to only 1 percent of households that received vouchers. Even though these

results suggest that cash may be more conducive to monetary savings, while vouchers are more conducive to asset purchases, the study did not provide evidence that one modality has a greater effect on asset ownership than the other.

Income. Regarding the relative effectiveness of different modalities, household income is examined only by Aker (2017), who compared the effectiveness of unconditional cash transfers and vouchers in increasing access to food and essential non-food items in an informal camp for internally displaced persons in DRC. The author does not find a statistically significant difference in endline household incomes between unconditional cash transfer and voucher groups, suggesting that one modality does not have a greater effect than the other.

4.3 Human Development Outcomes

In terms of education, health, and labor outcomes, there is not a single evaluation on the relative effectiveness of different modalities in improving human capital outcomes in humanitarian settings, which highlights the urgent need for more research in this field.

However, a handful of studies present data on the relative effectiveness of cash and in-kind transfers in non-humanitarian settings on short and longer-term nutrition-related outcomes from which we can extrapolate some lessons to inform humanitarian debates. For instance, Cunha (2014) measured the impact of a food assistance program in Mexico and shows that both food and cash transfers increased the intake of micronutrients (iron) among children. However, the difference is not statistically significant. Anemia prevalence was also reduced in both food and cash receiving households.

In Uganda, Gilligan and Roy (2013) examined the impact of two transfer modalities--cash vs. food--linked to preschool enrollment. They find that cash transfers decreased anemia prevalence by approximately ten percentage points among children, while food transfers had no significant impacts. The authors interpret the limited impact of food as potentially driven by factors such as (i) households sharing food rations across all household members, reducing rations targeted only for children; and (ii) households not valuing the food ration as much because it was difficult to sell in the market in exchange for cash. In another example, Baker, Filmer, and Rigolini (2014) evaluated the impact of a food-cash scholarship program in Cambodia

and found that neither treatment modality had significant impacts on anthropometric indicators, possibly because of the small transfer size and short treatment exposure.

Lastly, Langendorf et al. (2014) compared several types of cash and food combinations with the aim to reduce severe malnutrition and mortality rates among children. Their findings suggest that combining cash and food transfers may reduce the incidence of malnutrition at about twice the rate compared to either cash transfers or supplementary food alone.

While the cash versus in-kind transfer debate is largely about demand-side issues, there is a much larger agenda around the supply-side services, such as health and education, especially in humanitarian settings. In particular, it is important to note that transfers cannot replace services and when it comes to the effectiveness and efficiency of transfer-based interventions, whether cash or in-kind. In terms of human development outcomes, the availability and quality of health and education services is indispensable. In other words, there is little rationale to implement cash or in-kind transfers to improve health and/or education outcomes if the supply of such services is unavailable or of inadequate quality. For instance, de Hoop et al. (2019) find that cash provided to children increased school attendance among Syrian children in Lebanon, but the effects of the humanitarian response were limited to overcrowding in schools. This evaluation highlights the importance of being mindful of supply changes when increasing the demand for services.

4.4 Gender Outcomes

There is minimal literature that investigates the relative effectiveness of cash and in-kind transfers on gender-based violence, women's empowerment, and social cohesion in humanitarian settings

Gender-based violence. In the context of the Colombian refugee crisis, Hidrobo et al. (2016) studied whether equally valued transfers of cash, vouchers, and food targeted to women have different impacts on gender-based violence (GBV). Overall, the study shows that transfer interventions (CCT, FT, and vouchers) significantly decreased controlling behaviors and physical/sexual violence compared to the control group. When examined by individual modality, they find that food transfers reduced physical or sexual violence, cash reduced controlling behaviors, and vouchers reduced controlling behaviors as well as physical or sexual

violence. This finding suggests that partners do not use violence to extract resources because the effects are similar for cash, which can be easily extracted, as well as for food transfers and food vouchers, which cannot be easily extracted. However, differences across modalities are not statistically significant.

Women’s empowerment. Aker (2017) is the only study that compared the relative effectiveness of female-targeted unconditional cash transfers and vouchers on intra-household decision-making in a humanitarian context (a refugee camp in eastern DRC). The author finds that most respondents reported making joint decisions on children’s education, inter-household sharing, and savings, which did not differ by transfer modality. Interestingly, however, the cash group is less likely to discuss the use of transfers with other family members (relative to the voucher group).²³

4.5 Social Cohesion Outcomes

Social cohesion. In terms of studies that measure the relative effectiveness of different modalities in humanitarian contexts, only one study looked at impacts on social cohesion. Aker (2017) compared the relative effectiveness of unconditional cash transfers and vouchers in a refugee camp context in eastern DRC. This study measured social cohesion as a willingness to share part of the transfer with other households. The author finds that both types of program recipients shared part of their transfer, suggesting that sharing is an important coping mechanism within the refugee camp. While cash transfer households were 15 percentage points more likely to share the money received with other households, voucher households were 15 percentage points more likely to share goods purchased with the transfer.

5. Evidence Gaps and Areas for Future Research

Given the relatively limited evidence on the impact of humanitarian assistance programs, and especially the lack of evidence on the relative effectiveness of modalities, it is very challenging to draw conclusions on the generalizability and the applicability of such evidence to

²³ Aker et al. (2011) also find that the mobile money transfer system, compared to manual cash transfers, resulted in an increase in the diversity of crops grown by the household. The impact was driven by an increase in two marginal cash crops which are primarily grown by women. While not an explicit measure of control over resources, this evidence suggests there may be positive impacts of the mobile money modality on women’s decision-making power beyond the cash transferred. Authors theorize that this is due to the increased privacy that mobile money affords women. However, more evidence is needed on the potentially empowering aspects of digital modalities.

other contexts. Most studies in our review report very little information on operational aspects and mechanisms behind the results, which limits the understanding of what makes a particular intervention successful and the possibility of policy makers replicating programs in similar contexts. In this section, we propose several areas of focus for future research.

Basic Needs. First, we need to better understand how different modalities affect types of food consumed and consumption at the individual level (e.g., children vs. adults or male vs. female). The impacts of among cash versus in-kind transfers depend on the type of indicators used to measure them (e.g., caloric intake, dietary diversity) and on other factors such as the characteristics of the targeted population and the capacity of local markets. Second, the effect of food assistance on food expenditure is unclear because food expenditure can increase or decrease. We suggest studies focus more on food consumption when aid is in-kind. Third, there is modest evidence that cash transfers increase non-food expenditure more than other types of interventions. This implies that, in general, cash transfers better reflect the preferences of beneficiaries, which should be considered when deciding the types of interventions.

Despite most evidence in humanitarian settings relating to basic needs outcomes such as food security, food/non-food expenditure, and coping strategies, the evidence base on the comparative performance of transfer modalities in this cluster is still emerging and inconclusive. While cash allows beneficiaries to spend the money in their best interests, they might not be aware of the nutritional composition of different food groups. On the other hand, food transfers have the benefit of providing the most balanced diet, but it might be difficult to identify which nutrients households are deficient in, and this may vary across households. Therefore, the existing evidence suggests that what makes one modality more effective than another depends on other factors such as the characteristics of the targeted population and the capacity of local markets, among others. Future research could provide a better understanding of the interactions between different transfer modalities, the context, and the capacity of local markets.

Lastly, one important limitation of the current evidence is that basic needs outcomes are mainly measured at the household level, which leaves a gap of knowledge regarding intra-household distribution of food and non-food consumed, and highlights the need for individual-level or gendered indicators in order to improve our knowledge of consumption in fragile and conflict-affected settings.

Financial outcomes. To enhance livelihoods and earning opportunities in humanitarian settings, it is important to identify key constraints faced by vulnerable populations, such as a lack of capital or information and skills. Therefore, for this cluster of outcomes, a successful intervention could provide a blend of cash and in-kind interventions, where here, “in-kind” could refer to physical capital, asset, materials, training, or nudges. One example of this type of intervention that has not been explored much in humanitarian settings is graduation programs or “cash plus” interventions, which include not only cash transfers, but also the provision of livestock, life-skills coaching, training in income-generating activities, or access to saving facilities and microcredit. However, such programs can be difficult to implement in humanitarian settings because many fundamental services that complement the cash transfer might be destroyed during conflict or natural disasters. Despite this, even in such contexts, there are still opportunities to put together a package of support that would help people move out of vulnerability or better cope with risks and shocks. Cash transfers alone are not always the most effective modality for livelihoods, but a combination of both cash and in-kind modalities could do better in humanitarian contexts.²⁴

Human Development. The evidence is inconclusive for the human development field, which includes education, labor market participation, and health outcomes. In addition, there is no documentation on the relative effectiveness of different modalities in improving human capital outcomes, which highlights the need for more research in this field.

In terms of education outcomes, important areas for future research remain. For instance, similar to cash transfers, variation in the size and duration of food assistance may influence educational effectiveness. Moreover, understanding to what extent complementary interventions such as adapted materials for at-home learning, tablet-based learning, remote learning or other ed-tech interventions, as well as supply-side educational interventions, may enhance the effects of humanitarian assistance interventions. Another direction for future research in this field is the quality of education and learning outcomes.

Conflict-affected populations (such as forcibly displaced individuals) face multiple obstacles in humanitarian settings such as legal restrictions, loss of assets, physical and mental

²⁴ The analysis from this review suggests that “cash plus” interventions, such as the Mercy Corps’ cash transfer program that combined cash transfers with financial literacy training and savings encouragements, might have the potential for greater impact on livelihoods and household economic outcomes than cash alone.

health issues, skills mismatches, lack of social networks, excessive labor supply, and discrimination, among others. Overall, the findings suggest that labor market participation outcomes depend highly on the characteristics of those forcibly displaced, the labor market conditions, and available job opportunities. Therefore, more evidence on this area will be particularly useful for generalized findings.

In terms of health and nutrition outcomes, future studies need to investigate the frequency and types of illness among adults and the treatment conditions of such events. For instance, cash transfers combined with interventions addressing the psychological and mental health effects of forced displacement (e.g., therapy interventions) or vouchers labeled to pay for medical costs related to mental health issues could be interesting avenues to explore..

To summarize, these findings point to a clear need for more research on human development in humanitarian settings. In this field, “cash plus” interventions (a blend between cash and in-kind interventions that provide not only cash but also education, health, skills training, early childhood development, or nutrition services) may be more effective than either cash transfers or supplementary food alone.

Gender Outcomes. There is an evidence gap regarding the effectiveness and efficiency of social protection programs in terms of gender outcomes, with gender-based violence being the least explored area in the humanitarian literature. Women and girls are at increased risk of various negative outcomes in conflicts and humanitarian crises, including harm to their physical and mental health and increased exposure to violence and exploitation.

The existing evidence is scarce and ambiguous when focused on humanitarian settings. Since the studies that tried to examine women’s empowerment were only based on a few questions, including the perception of gender norms, we suggest that future research include more extensive measures of women’s empowerment by having a standalone module to contribute to the literature. Moreover, since gender-based violence is the least explored outcome in humanitarian settings, it would be interesting to explore whether humanitarian assistance interventions effectively reduce gender-based violence in humanitarian settings by carefully accounting for potential mechanisms in the intra-household dynamics. In addition, variations in recipient gender, marital status, and the size and duration of the transfer may impact gender outcomes differently. For example, it would be interesting to explore whether female-targeted

transfers can decrease gender-based violence and improve women's well-being in humanitarian settings.²⁵ More analysis on the comparative effectiveness and cost-efficiency of different modalities for gender objectives is also needed.

Other gender outcomes worth exploring in humanitarian settings are child marriage, teenage pregnancy, sexual exploitation, and abuse, especially in conflict-affected settings. Complementary components to cash transfers could also be considered. In addition, further investigation is needed to understand the medium- and long-term impacts of social protection interventions on women's and girl's socioeconomic vulnerability in humanitarian settings, as these may change over time. Lastly, considerations must be made concerning program design, such as the targeting and registration process, to reduce risks to women related to the changing household dynamics caused by social protection programs.

Social Cohesion. Sharing and social cohesion is an area where investigating different modalities is especially interesting as some transfers like mobile money transfers are much easier to hide than other types of transfers like food assistance. Refugees and internally displaced individuals lack social networks in host communities to help them overcome information asymmetries and integrate into the labor market. In this sense, interventions that complement social assistance with ways to build social networks for the forcibly displaced could lead to promising results. Given that there is little consensus on the exact domains and indicators necessary to measure social cohesion comprehensively, a more unified framework and consensus on the relevant components and measurement tools would contribute significantly to this literature. It would also be interesting to collect information on overall community dynamics, including spillover effects on non-recipient households in treatment communities, to assess potential negative effects on those not eligible for benefits.

6. Discussion and Conclusion

This study reviewed the existing evidence on the effectiveness and efficiency of humanitarian assistance programs across different domains. This systematic review complements existing

²⁵ In a non-humanitarian setting, Haushofer et al (2019) explore how giving unconditional cash transfers to both women and men in Kenya reduced different types of intimate partner violence. Transfers to women reduced physical and sexual violence, while transfers to men reduced only physical violence. The authors argue that husbands use physical violence to extract resources, but dislike it, while sexual violence is not used to extract resources, but is pleasurable.

evidence on the effectiveness of these programs in improving individual and household level outcomes, and informs the debate surrounding the comparative performance of different transfer modalities. Based on the available evidence, our review suggests the following conclusions:

Despite the growing use of social protection programs in humanitarian settings, there is relatively little rigorous research on what works, for whom, and why. From our review, we find that only 21 studies have used experimental or quasi-experimental methods to rigorously assess the impact of humanitarian assistance programs, and almost none of them discusses the cost-effectiveness of such programs. This is consistent with previous reviews that carry out a systematic review of cash-based approaches in humanitarian settings and find that only five studies rigorously measured the impact of cash-based schemes (Doocy and Tappis, 2018).

There is large variation in the availability of evidence for humanitarian assistance programs across different sectors. On the one hand, the evidence base for studies that report on basic needs such as food security, food and non-food expenditures, and coping strategies is quite substantial, followed by studies that report on the household economy and financial outcomes where the evidence can be categorized as emerging. On the other hand, the evidence base for studies that report on human development outcomes, such as health, education, labor, as well as gender and social cohesion, is much more limited. In particular, we find that women's empowerment and gender-based violence outcomes are the least explored in the context of humanitarian assistance programs. This imbalance suggests that policy decisions, especially in terms of human development, should be made with caution due to the limited generalization of the results, and also indicates the need for research to fill key evidence gaps.

In terms of the impact of humanitarian assistance programs, the limited evidence points to mixed and inconclusive results. The literature suggests that most humanitarian assistance programs can effectively improve individual and household-level outcomes compared to the control group. However, the evidence is too limited to be able to draw general conclusions.

Regarding the relative effectiveness of different modalities, the decision about the most appropriate modality versus another cannot be generalized and pre-determined. The existing evidence suggests that modality performance and their differences depend on a series of factors such as the nature of the humanitarian crisis (sudden onset vs. slow onset), the objective of the program or the main outcome of interest, the profile of the targeted population, implementation

costs, and local market capacity, among others. All these factors must be considered when deciding between transfer modalities. Given the limited evidence on the relative effectiveness of transfer modalities in humanitarian settings, future research could provide a better understanding of the conditions for which cash transfers are more effective than in-kind transfers. In addition, it would be beneficial to explore complementarities between different interventions, such as blended interventions or “cash plus” interventions.

While the effectiveness of cash and food transfers is similar, the efficiency is generally in favor of cash. The evidence from our review indicates that cash transfers seem to be more efficient to deliver than in-kind modalities, suggesting that they might be more cost-effective on average. In particular, studies suggest that mobile money cash transfers are the most efficient transfer method provided that mobile network infrastructure is available, it is convenient and, beneficiaries understand how to withdraw and transfer the mobile money. The second most efficient transfer method is manual cash delivery, followed by voucher transfers, with food transfers being the most expensive way to deliver assistance. Given that none of the included studies included a cost-effectiveness analysis, we argue that future impact evaluations need to provide a more robust analysis for cost calculations of humanitarian programs.

Given the lack of rigorous causal evidence on humanitarian assistance programs, there is a high dividend to be earned from conducting more impact evaluations in humanitarian settings. To better understand implementation design choices, such as which population to target, what type of modality to transfer, and the duration and frequency of transfers, among others, substantial evidence gaps need to be filled. In this review, we identified several cross-cutting evidence gaps where more studies would be needed : (i) more evidence is needed on the impact of humanitarian assistance on human development, gender, and social cohesion; (ii) a better understanding of the conditions for which cash transfers can be more effective than in-kind transfers; (iii) a need to improve the targeting mechanisms in humanitarian settings; and (iv) a need to better understand not only the immediate impacts of humanitarian assistance programs but also the long-term effects that arise in the recovery period.

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Table 1. Literature Sources and Search Terms

Sources	Search Terms
<p>Peer-reviewed sources: Google Scholar, Microsoft Academic, JSTOR, ResearchGate, Stanford University Journals Database, ScienceDirect, Social Science Research Network (SSRN), Web of Science</p>	<p>(cash transfer OR cash voucher OR food voucher OR food transfer OR humanitarian response OR Humanitarian Assistance OR disaster response OR emergency relief OR humanitarian disaster OR emergency aid) AND</p>
<p>Grey literature sources: <i>Humanitarian Agency Websites:</i> Oxfam, MercyCorps, International Federation of Red Cross and Red Crescent Societies, International Rescue Committee, UNICEF, OCHA, World Food Program, Action Aid, Save the Children, World Vision, Concern Worldwide;</p>	<p>(impact evaluation OR impact assessment OR refugee OR refugee camp OR IDP OR internally displaced OR conflict OR war OR civil war OR armed conflict OR conflict affected OR natural disaster OR earthquake OR flood OR tsunami OR avalanche OR landslide OR rockslide OR mudslide OR cyclone OR hurricane OR tidal wave OR typhoon OR drought)</p>
<p><i>Research institution and network websites:</i> Center for Global Development, International Initiative for Impact Evaluation (3ie), International Food Policy Research Institute (IFPRI), ALNAP</p>	

Table 2. Inclusion Criteria

Inclusion Criteria	
Type of emergency	A humanitarian crisis is defined as a singular event or a series of events that threaten the health, safety, or well-being of a community or large group of people (Humanitarian Coalition). Types of humanitarian crises included in the review are (i) natural disasters, (ii) armed conflicts and refugee crises, and (iii) health outbreaks. These include both sudden onset and slow onset or protracted crises.
Program beneficiary	Populations affected by humanitarian crises (e.g., refugees, IDPs, vulnerable populations, etc.). Affected populations could include those that were not displaced, those displaced within their home country, or refugees displaced in neighboring countries.
Program timeline	Programs implemented before the onset of the emergency and evaluated during the humanitarian setting were excluded from the review. Only programs implemented as a direct response following the humanitarian crises were included.
Type of intervention	Types of humanitarian assistance programs that were included are: (i) unconditional cash transfer programs, (ii) conditional cash transfer programs, (iii) voucher programs, (iv) food transfer programs (including school feeding), and (v) public works.
Type of study	Types of studies that were included are mainly impact evaluation studies. Peer-reviewed journal articles, Working Paper series, and other comparative studies/discussion papers only if they included a formal institution/citation
Study design	Studies implementing experimental and quasi-experimental methods with a credible source of exogenous variation. We excluded studies that do not employ one of the following: Randomized control trial (RCT), Regression discontinuity design (RDD), Diff-in-diff (DID), Instrumental variables (IV), Propensity Score Matching (PSM).
Type of outcome	Primary outcomes: Individual and/or household level sector-specific outcomes such as changes in food security, household expenditures (food and non-food), household assets, credit and savings, income, social cohesion, health and nutrition, education, labor, women’s empowerment, gender-based violence. Secondary outcomes: costs of implementing humanitarian assistance interventions (efficiency or value for money).
Publication date range	Any
Geographic focus	Global (LMICs)

Table 3. Characteristics of the Humanitarian Assistance Studies

	Mean	Standard Deviation
<i>Panel A. Study level characteristics (N=21)</i>		
<i>Publication type</i>		
Journal article	0.52	0.51
Technical report	0.33	0.48
Working paper	0.14	0.36
<i>Humanitarian crisis category</i>		
Conflict	0.76	0.44
Refugee-camp setting	0.33	0.48
Natural disaster	0.24	0.44
Health outbreak	0.00	0.00
<i>Study design</i>		
Experimental design (RCT)	0.43	0.51
Quasi-experimental design	0.57	0.51
Difference-in-differences	0.10	0.30
Regression discontinuity design	0.24	0.44
Propensity score matching	0.23	0.44
Studies with pure control group	0.81	0.40
<i>Costing analysis</i>		
Costing analysis	0.28	0.46
<i>Type of humanitarian assistance intervention</i>		
UCT	0.52	0.51
FT	0.43	0.51
Voucher	0.24	0.44
CCT	0.19	0.40
PW	0.10	0.30
<i>Regional Distribution</i>		
Africa	0.38	0.50
East Asia and Pacific	0.10	0.30
Latin America and Caribbean	0.14	0.36
Middle East and North Africa	0.33	0.48
South Asia	0.05	0.22

Note: This table presents the characteristics of the 21 studies included in the analysis. UCT=unconditional cash transfers, FT= food transfer (includes school feeding), CCT=conditional cash transfer, PW=public works (cash for work or food for work)

Table 4. Characteristics of the Humanitarian Assistance Interventions

	Mean	Standard Deviation
<i>Panel B. Intervention level characteristics (N=42)</i>		
<i>Type of program modality</i>		
UCT	0.48	0.51
FT	0.26	0.45
Voucher	0.12	0.33
CCT	0.10	0.30
PW	0.05	0.22
<i>Target population</i>		
Refugees/IDPs	0.43	0.50
Severely food insecure households	0.38	0.49
Refugees/IDPs & food insecure households	0.18	0.39
<i>Area of implementation</i>		
Rural	0.60	0.50
Rural & Urban	0.07	0.26
<i>Identify of the recipient</i>		
Adult male or household head	0.60	0.50
Adult female	0.38	0.49
Primary caregiver of child 5-14	0.02	0.15
<i>Implementer type</i>		
International organization (IO)	0.55	0.50
Government	0.14	0.35
NGO	0.31	0.47
<i>IE Design characteristics</i>		
Number of intervention arms per program	2.05	0.989
Sample size (households)	2077.23	2297.94
Length exposure (in months)	9	5.4

Note: This table presents characteristics of the 42 interventions or contrasts included in the analysis. UCT=unconditional cash transfers, FT= food transfer (includes school feeding), CCT=conditional cash transfer, CFW=cash for work, and FFV= food for work.

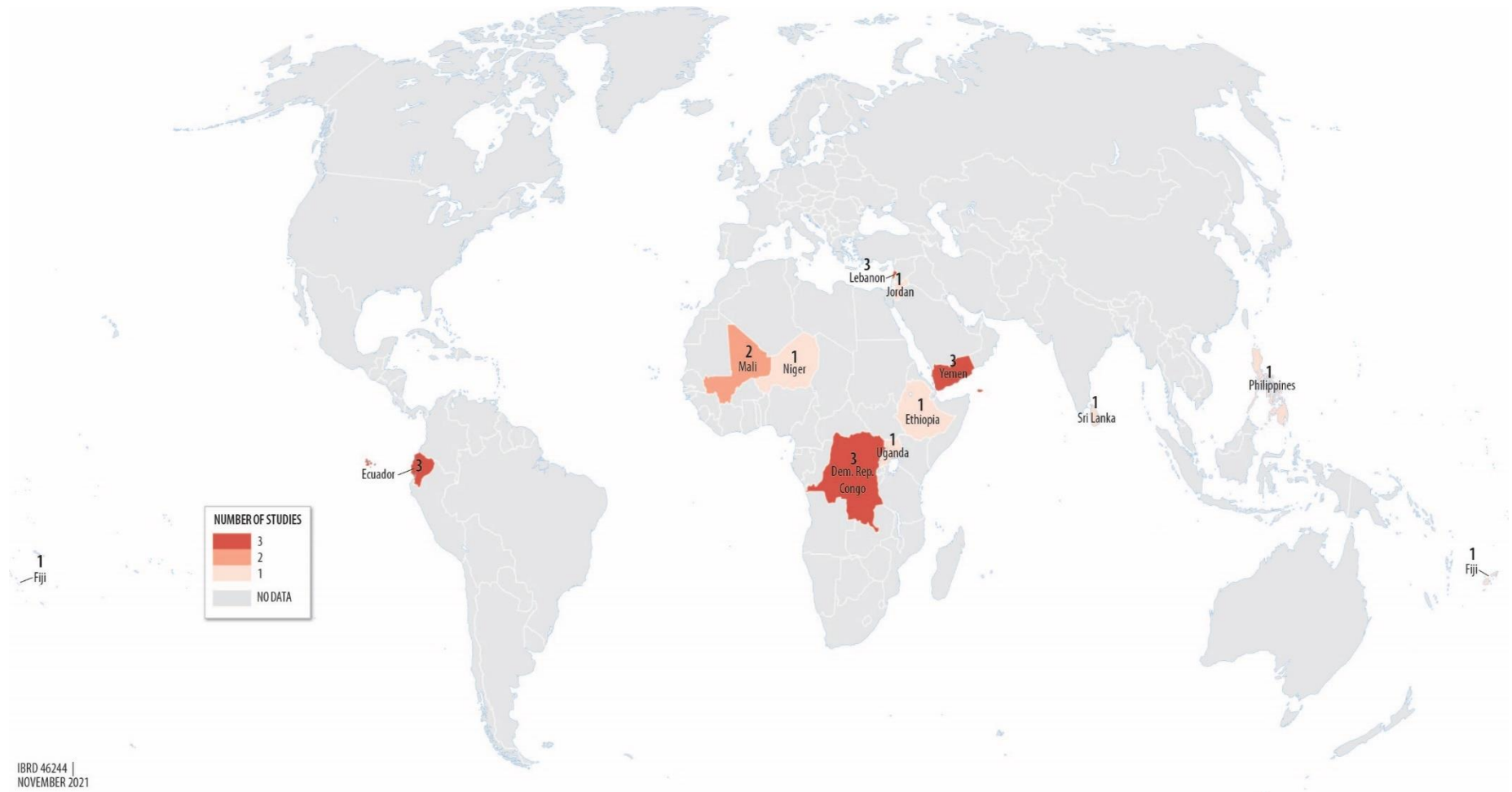
Table 5. Level of Evidence in Humanitarian Settings by Outcome Category

Category	Outcome	Number of Studies	Evidence Base	Overall Evidence Base
Basic Needs	Non-food Consumption	13	Substantial	Substantial
	Food Security	12	Substantial	
	Food Expenditure	8	Emerging	
	Coping Strategies	8	Emerging	
Financial Outcomes	Asset Ownership	10	Emerging	Emerging
	Credit and Savings	6	Limited	
	Income	3	Limited	
Human Development	Education	6	Limited	Limited
	Health	5	Limited	
	Labor	4	Limited	
Gender	Women's Empowerment	4	Limited	Limited
	GBV	1	Very Limited	
Social Cohesion	Social cohesion	4	Limited	Limited

Table 6. Effectiveness of Different Modalities by Sector-Specific Areas

<i>Without a pure control group</i>			<i>Most Effective Modality</i>					
<i>Study</i>	<i>Country</i>	<i>Transfer type</i>	<i>Basic Needs</i>					
			<i>Food Consumption</i>	<i>Calorie Intake</i>	<i>Dietary Diversity</i>	<i>Food Expenditure</i>	<i>Non-Food Expenditure</i>	<i>Coping Strategies</i>
(Aker, 2017)	DRC	UCT/Voucher	UCT/Voucher	-----	UCT/Voucher	Voucher	UCT	-----
(Hidrobo et al., 2014)	Ecuador	CCT/Voucher/FT	FT	FT	Vouchers	-----	CCT/Voucher/FT	-----
(Aker et al., 2011)	Niger	UCT mobile/manual	-----	-----	UCT mobile	-----	UCT mobile/manual	UCT mobile/manual
(Mercy Corps, 2015)	Philippines	UCT single/multiple	-----	-----	-----	-----	UCT single/multiple	-----
(Sandström & Tchatchua, 2010)	Sri Lanka	UCT/FT	-----	-----	UCT	UCT/FT	UCT	-----
(Schwab, 2019)	Yemen	UCT/FT	-----	-----	-----	-----	UCT	UCT/FT
			<i>Financial Outcomes</i>					
<i>Study</i>	<i>Country</i>	<i>Transfer type</i>	<i>Asset ownership</i>	<i>Savings</i>	<i>Income</i>			
(Aker, 2017)	DRC	UCT/Voucher	UCT/Voucher	UCT	UCT/Voucher			
(Aker et al., 2011)	Niger	UCT mobile/manual	UCT mobile	-----	-----			
(Mercy Corps, 2015)	Philippines	UCT	UCT single	UCT + nudges	-----			
			<i>Human Development</i>					
<i>Study</i>	<i>Country</i>	<i>Transfer type</i>	<i>Education</i>	<i>Health</i>	<i>Labor</i>	<i>Subjective well-being</i>		
<i>(No Evidence)</i>	-----	-----	-----	-----	-----	-----		
			<i>Gender</i>					
<i>Study</i>	<i>Country</i>	<i>Transfer type</i>	<i>GBV</i>	<i>Women's Empowerment</i>				
(Aker, 2017)	DRC	UCT/Voucher	-----	UCT/Voucher				
(Hidrobo et al., 2014)	Ecuador	CCT/Voucher/FT	CCT/Voucher/FT	-----				
			<i>Social Cohesion</i>					
<i>Study</i>	<i>Country</i>	<i>Transfer type</i>	<i>Social Cohesion</i>					
(Aker, 2017)	DRC	UCT/Voucher	UCT/Voucher					

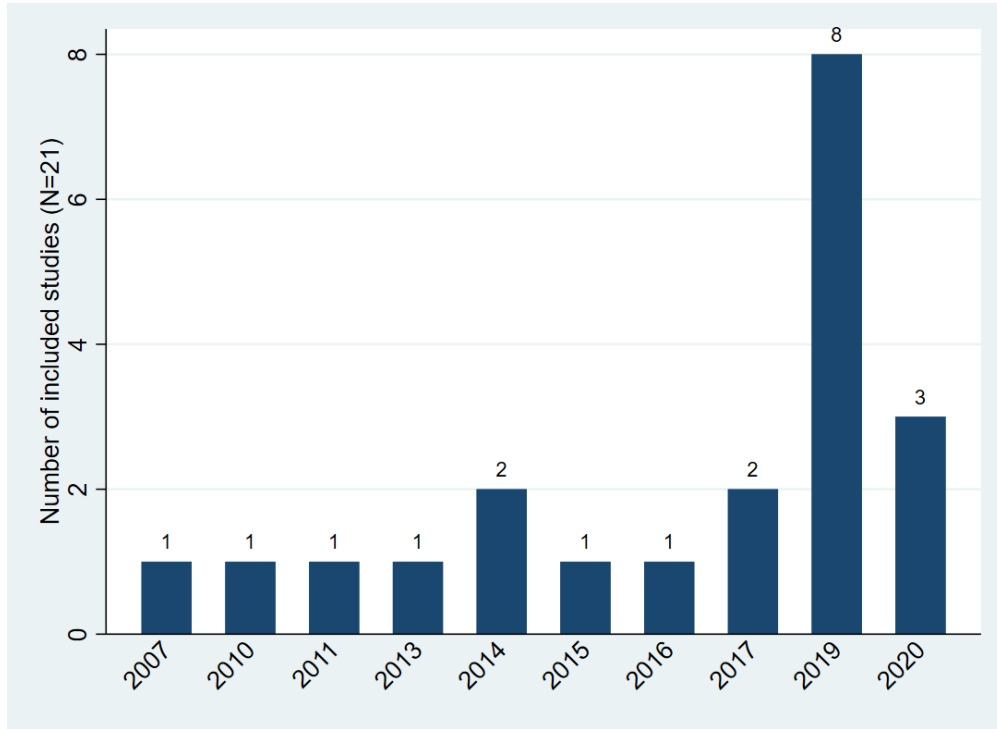
Figure 1: Geographic Distribution of Humanitarian Assistance Studies



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Note: The sample of 21 studies included in our review covers the following countries: Democratic Republic of Congo (DRC), Ecuador, Ethiopia, Fiji, Jordan, Lebanon, Mali, Niger, Philippines, Sri Lanka, Uganda and Yemen.

Figure 2: Number of included studies by publication year



Notes: Total number of studies included (N=21)

Appendix – For Online Publication Only

Appendix Table 1. Characteristics of included experimental and quasi-experimental studies

Country	Study	Emergency type	Program Name	IE Design	Intervention type	Publication year	Publication Type
DRC	(Aker, 2017)	Ongoing DRC Conflict	DRC Cash and Voucher Program in the Bushani Camp	RCT without pure control	UCT/Voucher	2017	Academic Journal
DRC	(Quattrochi et al., 2020)	Ongoing DRC Conflict	DRC Vouchers for Essential Household Items (EHIs) Program	RCT with pure control	Voucher	2020	Technical Report
DRC	(Bonilla et al., 2017)	Ongoing DRC Conflict	DRC Cash Transfer UNICEF ARCC II Programme	Propensity Score Matching (PSM)	UCT	2017	Technical Report
Ecuador	(Hidrobo et al., 2014)	Colombian Refugee Crisis	Ecuador WFP Food, Cash, and Voucher Transfer Program	RCT with pure control	CCT/Voucher/FT	2014	Academic Journal
Ecuador	(Hidrobo et al., 2016)	Colombian Refugee Crisis	Ecuador WFP Food, Cash, and Voucher Transfer Program	RCT with pure control	CCT/Voucher/FT	2016	Academic Journal
Ecuador	(Valli et al., 2019)	Colombian Refugee Crisis	Ecuador WFP Food, Cash, and Voucher Transfer Program	RCT with pure control	CCT/Voucher/FT	2019	Academic Journal
Ethiopia	(Gilligan & Hoddinott, 2007)	2002 Ethiopian Drought	Ethiopia Food Distribution and Employment Generation Schemes (EGS)	Difference-in-Difference (DID)	FT/FFW	2007	Academic Journal
Fiji	(Ivaschenko et al., 2020)	Fiji Tropical Cyclone Winston	Fiji Poverty Benefit Scheme (PBS) - Cash Transfer Program	Regression Discontinuity Design (RDD)	UCT	2019	Academic Journal
Jordan	(Lombardini & Mager, 2020)	Syrian Refugee Crisis	Refugees Cash for Work (CFW) Program	Propensity Score Matching (PSM)	CFW	2020	Technical Report
Lebanon	(Lehmann & Masterson, 2014)	Syrian Refugee Crisis	Lebanon Winterization Cash Transfer Program	Regression Discontinuity Design (RDD)	UCT	2014	Technical Report
Lebanon	(de Hoop, 2019)	Syrian Refugee Crisis	Lebanon No Lost Generation (NLG) Cash Transfer Program	Regression Discontinuity Design (RDD)	UCT	2019	Academic Journal
Lebanon	(Chaaban et al., 2020)	Syrian Refugee Crisis	Lebanon Multi-Purpose Cash (MPC) Program	Regression Discontinuity Design (RDD)	UCT	2020	Technical Report
Mali	(Tranchant et al., 2019)	Mali War	Mali Food Assistance Program (GFD + School Feeding)	Propensity Score Matching (PSM)	FT	2019	Academic Journal
Mali	(Aurino et al., 2019)	Mali War	Mali Food Assistance Program (GFD + School Feeding)	Propensity Score Matching (PSM)	FT	2019	Academic Journal
Niger	(Aker et al., 2011)	Niger Shock Drought	Niger Mobile Cash Transfer Program	RCT without pure control	UCT	2011	Working paper series
Philippines	(Mercy Corps, 2015)	Philippines Typhoon Haiyan	Philippines TabangKO Cash Transfer Program	RCT without pure control	UCT	2015	Technical Report

Sri Lanka	(Sandström & Tchatchua, 2010)	2004 Indian Ocean Tsunami	Sri Lanka WFP Cash Transfer Pilot (CTPP) Program	RCT without pure control	UCT/FT	2010	Technical Report
Uganda	(Tusiime et al., 2013)	Ongoing Uganda Conflict	Uganda General Food Distribution (GFD) Program	Propensity Score Matching (PSM)	FT	2013	Academic Journal
Yemen	(Ecker et al., 2019)	Yemen Civil War	Yemen Social Welfare Fund (SWF) Cash Transfer program	Difference-in-Difference (DID)	UCT	2019	Working paper series
Yemen	(Kurdi et al., 2019)	Yemen Civil War	Yemen Cash for Nutrition Program	RCT with pure control	CCT	2019	Working paper series
Yemen	(Schwab, 2019)	Civil Unrest in Yemen	Yemen Seasonal Emergency Safety Net (ESN) Transfer Program	Regression Discontinuity Design (RDD)	UCT/FT	2019	Academic Journal

Appendix Table 2. Program and Intervention Characteristics

Country	Study	Program Name	Arms	Intervention	Time Frame	Population	Location	Implementer	Identity of Recipient	Transfer value	Total Sample	Unit of Obs.	Length Exposure
DRC	(Aker, 2017)	DRC Cash and Voucher Program in the Bushani Camp	T1	UCT	2011–2012	IDP households in informal refugee camp	Rural	Concern Worldwide	Adult female	US\$ 130	252	Households	6 months
DRC	(Aker, 2017)	DRC Cash and Voucher Program in the Bushani Camp	T2	Cash Voucher	2011–2012	IDP households in informal refugee camp	Rural	Concern Worldwide	Adult female	US\$ 130	252	Households	6 months
DRC	(Quattrochi et al., 2020)	DRC Vouchers for Essential Household Items (EHIs) Program	T	Non-food Voucher	2017–2018	IDP and conflicted affected households in Eastern DRC	Rural	UNICEF, OCHA	Adult female	US\$ 660 - 1080	856	Households	12 months
DRC	(Bonilla et al., 2017)	DRC Cash Transfer UNICEF ARCC II Programme	T1	UCT (Single)	2013–2015	IDP and conflicted affected households in Eastern DRC	Rural	UNICEF	Adult or household head	US\$ 120	1,060	Households	24 months
DRC	(Bonilla et al., 2017)	DRC Cash Transfer UNICEF ARCC II Programme	T2	UCT (Multiple)	2013–2015	IDP and conflicted affected households in Eastern DRC	Rural	UNICEF	Adult or household head	US\$ 120	1,060	Households	24 months
Ecuador	(Hidrobo et al., 2014)	Ecuador WFP Food, Cash, and Voucher Transfer Program	T1	FT	2011	Columbian refugees and vulnerable Ecuadorian households	Urban	WFP	Adult female	US\$ 240	2,087	Households	6 months
Ecuador	(Hidrobo et al., 2014)	Ecuador WFP Food, Cash, and Voucher Transfer Program	T2	CCT	2011	Columbian refugees and vulnerable Ecuadorian households	Urban	WFP	Adult female	US\$ 240	2,087	Households	6 months
Ecuador	(Hidrobo et al., 2014)	Ecuador WFP Food, Cash, and Voucher Transfer Program	T3	Food Voucher	2011	Columbian refugees and vulnerable Ecuadorian households	Urban	WFP	Adult female	US\$ 240	2,087	Households	6 months
Ecuador	(Hidrobo et al., 2016)	Ecuador WFP Food, Cash, and Voucher Transfer Program	T1	FT	2011	Columbian refugees and vulnerable Ecuadorian households	Urban	WFP	Adult female	US\$ 240	1,226	Women	6 months
Ecuador	(Hidrobo et al., 2016)	Ecuador WFP Food, Cash, and Voucher Transfer Program	T2	CCT	2011	Columbian refugees and vulnerable Ecuadorian households	Urban	WFP	Adult female	US\$ 240	1,226	Women	6 months
Ecuador	(Hidrobo et al., 2016)	Ecuador WFP Food, Cash, and Voucher Transfer Program	T3	Food Voucher	2011	Columbian refugees and vulnerable Ecuadorian households	Urban	WFP	Adult female	US\$ 240	1,226	Women	6 months
Ecuador	(Valli et al., 2019)	Ecuador WFP Food, Cash, and Voucher Transfer Program	T1	FT	2011	Columbian refugees and vulnerable Ecuadorian households	Urban	WFP	Adult female	US\$ 240	1,878	Households	6 months
Ecuador	(Valli et al., 2019)	Ecuador WFP Food, Cash, and Voucher Transfer Program	T2	CCT	2011	Columbian refugees and vulnerable Ecuadorian households	Urban	WFP	Adult female	US\$ 240	1,878	Households	6 months

Ecuador	(Valli et al., 2019)	Ecuador WFP Food, Cash, and Voucher Transfer Program	T3	Food Voucher	2011	Columbian refugees and vulnerable Ecuadorian households	Urban	WFP	Adult female	US\$ 240	1,878	Households	6 months
Ethiopia	(Gilligan & Hoddinott, 2007)	Ethiopia Food Distribution and Employment Generation Schemes (EGS)	T1	FT	1994–2004	Rural households at risk of famine	Rural	Government of Ethiopia	Adult or household head	N/A	2,283	Households	18 months
Ethiopia	(Gilligan & Hoddinott, 2007)	Ethiopia Food Distribution and Employment Generation Schemes (EGS)	T2	Food for Work	1994–2004	Rural households at risk of famine	Rural	Government of Ethiopia	Adult or household head	N/A	2,283	Households	18 months
Fiji	(Ivaschenko et al., 2020)	Fiji Poverty Benefit Scheme (PBS) - Cash Transfer Program	T	UCT	2016	Low income, cyclone-affected households	Rural	Government of Fiji	Adult or household head	US\$ 300	432	Households	Single instant
Jordan	(Lombardini & Mager, 2020)	Jordan Refugees Cash for Work (CFW) Program	T	Cash for Work	2017–2018	Syrian refugees in the Za'atari refugee camp in Jordan	Urban	Oxfam	Adult or household head	US\$ 500 - 1500	1,136	Households	4 months
Lebanon	(Chaaban et al., 2020)	Lebanon Multi-Purpose Cash (MPC) Program	T1	UCT (Discont.)	2017–2018	Vulnerable Syrian refugee households in Lebanon	Urban	WFP, UNHCR	Adult or household head	US\$ 1392 - 4176	11,457	Households	12 months
Lebanon	(Chaaban et al., 2020)	Lebanon Multi-Purpose Cash (MPC) Program	T2	UCT (Short)	2017–2018	Vulnerable Syrian refugee households in Lebanon	Urban	WFP, UNHCR	Adult or household head	US\$ 1392 - 4176	11,457	Households	4-12 months
Lebanon	(Chaaban et al., 2020)	Lebanon Multi-Purpose Cash (MPC) Program	T3	UCT (Long)	2017–2018	Vulnerable Syrian refugee households in Lebanon	Urban	WFP, UNHCR	Adult or household head	US\$ 5568 - 7656	11,457	Households	16-22 months
Lebanon	(Lehmann & Masterson, 2014)	Lebanon Winterization Cash Transfer Program	T	UCT	2013–2014	Severely food-insecure Syrian refugee households	Urban	IRC	Adult or household head	US\$ 575	1,363	Households	5 months
Lebanon	(de Hoop, 2019)	Lebanon No Lost Generation (NLG) Cash Transfer Program	T	UCT	2016–2017	Vulnerable Syrian refugee households with children in Lebanon	Rural	UNICEF, WFP	Primary caregiver of child 5–14	US\$ 240	2,767	Children	12 months
Mali	(Aurino et al., 2019)	Mali Food Assistance Program (GFD + School Feeding)	T1	FT	2012–2017	Vulnerable, food-insecure IDP households	Rural	WFP	Adult or household head	N/A	1,264	Households	12 months
Mali	(Aurino et al., 2019)	Mali Food Assistance Program (GFD + School Feeding)	T2	SF	2012–2017	Vulnerable, food-insecure IDP households with children	Rural	WFP	Adult or household head	N/A	1,264	Households	12 months
Mali	(Tranchant et al., 2019)	Mali Food Assistance Program (GFD + School Feeding)	T1	FT	2012–2017	Vulnerable, food-insecure IDP households	Rural	WFP	Adult or household head	N/A	1,422	Households	12 months
Mali	(Tranchant et al., 2019)	Mali Food Assistance Program (GFD + School Feeding)	T2	SF	2012–2017	Vulnerable, food-insecure IDP households	Rural	WFP	Adult or household head	N/A	1,422	Households	12 months

Niger	(Aker et al., 2011)	Niger Mobile Cash Transfer Program	T1	UCT	2010	Drought-affected households in the Tahoua region	Rural	Concern Worldwide	Adult female	US\$ 215	1200	Households	5 months
Niger	(Aker et al., 2011)	Niger Mobile Cash Transfer Program	T2	UCT (Mobile)	2010	Drought-affected households in the Tahoua region	Rural	Concern Worldwide	Adult female	US\$ 215	1,200	Households	5 months
Niger	(Aker et al., 2011)	Niger Mobile Cash Transfer Program	T3	UCT & Phone	2010	Drought-affected households in the Tahoua region	Rural	Concern Worldwide	Adult female	US\$ 215	1,200	Households	5 months
Philippines	(Mercy Corps, 2015)	Philippines TabangKO Cash Transfer Program	T1	UCT (S)	2014–2015	Typhoon affected households	Rural	Mercy Corps	Adult or household head	US\$ 89	1,659	Households	6 months
Philippines	(Mercy Corps, 2015)	Philippines TabangKO Cash Transfer Program	T2	UCT (M)	2014–2015	Typhoon affected households	Rural	Mercy Corps	Adult or household head	US\$ 89	1,659	Households	6 months
Philippines	(Mercy Corps, 2015)	Philippines TabangKO Cash Transfer Program	T3	UCT (M) & FO	2014–2015	Typhoon affected households	Rural	Mercy Corps	Adult or household head	US\$ 89	1,659	Households	6 months
Philippines	(Mercy Corps, 2015)	Philippines TabangKO Cash Transfer Program	T4	UCT (M) & FO & SMS	2014–2015	Typhoon affected households	Rural	Mercy Corps	Adult or household head	US\$ 89	1,659	Households	6 months
Sri Lanka	(Sandström & Tchatchua, 2010)	Sri Lanka WFP Cash Transfer Pilot (CTPP) Program	T1	UCT	2005–2006	Tsunami affected households	Rural	WFP	Adult or household head	US\$ 24	1,360	Households	4 months
Sri Lanka	(Sandström & Tchatchua, 2010)	Sri Lanka WFP Cash Transfer Pilot (CTPP) Program	T2	FT	2005–2006	Tsunami affected households	Rural	WFP	Adult or household head	N/A	1,360	Households	4 months
Uganda	(Tusiime et al., 2013)	Uganda General Food Distribution (GFD) Program	T	FT	2008	Conflict-affected and food-insecure households	Rural	WFP	Adult or household head	N/A	1,254	Households	12 months
Yemen	(Ecker et al., 2019)	Yemen Social Welfare Fund (SWF) Cash Transfer program	T1	UCT (Old)	2012–2013	Socially and economically vulnerable populations	Urban + Rural	Government of Yemen, World Bank	Adult or household head	US\$ 224	3,316	Households	12 months
Yemen	(Ecker et al., 2019)	Yemen Social Welfare Fund (SWF) Cash Transfer program	T2	UCT (New)	2012–2013	Socially and economically vulnerable populations	Urban + Rural	Government of Yemen, World Bank	Adult or household head	US\$ 224	3,316	Households	12 months
Yemen	(Kurdi et al., 2019)	Yemen Cash for Nutrition Program	T	CCT	2015–2017	Vulnerable and poor mothers and pregnant women	Urban + Rural	Government of Yemen & Yemen SFD	Adult female	US\$ 450	2,000	Households	24 months
Yemen	(Schwab, 2019)	Yemen Seasonal Emergency Safety Net (ESN) Transfer Program	T1	FT	2010–2011	Food-insecure rural households	Rural	WFP	Adult or household head	US\$ 147	3,350	Households	6 months
Yemen	(Schwab, 2019)	Yemen Seasonal Emergency Safety Net (ESN) Transfer Program	T2	UCT	2010–2011	Food-insecure rural households	Rural	WFP	Adult or household head	US\$ 147	3,350	Households	6 months

Appendix Table 3. Outcomes reported in each study

Country	Study	Assets	Coping	Credit and Savings	Education	Food Expenditure	Food Security	Gender-based violence	Health	Income	Labor	Non-Food Expenditure	Social Cohesion	Subjective well-being	Women's Empowerment
DRC*	(Aker, 2017)	1	0	1	0	1	1	0	0	1	0	1	1	0	1
DRC	(Quattrochi et al., 2020)	1	1	1	1	0	1	0	1	1	0	0	1	1	0
DRC	(Bonilla et al., 2017)	1	1	1	1	0	1	0	0	0	0	1	0	0	0
Ecuador	(Hidrobo et al., 2014)	0	0	0	0	0	1	0	0	0	0	1	0	0	0
Ecuador	(Hidrobo et al., 2016)	0	0	0	0	0	0	1	0	0	1	1	0	0	1
Ecuador	(Valli et al., 2019)	0	0	0	0	0	0	0	0	0	0	0	1	0	0
Ethiopia	(Gilligan & Hoddinott, 2007)	1	0	0	0	0	1	0	0	0	0	0	0	0	0
Fiji	(Ivaschenko et al., 2019)	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Jordan	(Lombardini & Mager, 2020)	1	0	0	0	0	1	0	0	1	0	0	0	1	1
Lebanon	(Chaaban et al., 2020)	0	0	0	1	0	1	0	1	0	1	1	0	0	0
Lebanon	(de Hoop, 2019)	0	0	0	1	0	0	0	0	0	0	1	0	0	0
Lebanon	(Lehmann & Masterson, 2014)	1	1	1	1	1	0	0	0	0	1	1	1	0	0
Mali	(Aurino et al., 2019)	0	1	0	1	0	0	0	0	0	0	0	0	0	0
Mali	(Tranchant et al., 2019)	0	0	0	0	1	1	0	1	0	0	1	0	0	0
Niger*	(Aker et al., 2011)	1	1	0	0	1	1	0	0	0	0	1	0	0	0
Philippines*	(Mercy Corps, 2015)	1	0	1	0	0	0	0	0	0	0	1	0	0	0
Sri Lanka*	(Sandström & Tchatchua, 2010)	0	0	0	0	1	1	0	0	0	0	1	0	0	0
Uganda	(Tusiime et al., 2013)	0	1	0	0	1	1	0	0	0	0	1	0	0	0
Yemen	(Ecker et al., 2019)	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Yemen	(Kurdi et al., 2019)	0	1	0	0	1	1	0	1	0	0	0	0	0	1
Yemen	(Schwab, 2019)	1	1	1	0	0	0	0	0	0	1	1	0	0	0
	With pure control group	7	7	4	6	4	9	1	5	2	4	9	3	2	3
	Without pure control group	3	1	2	0	3	3	0	0	1	0	4	1	0	1
		10	8	6	6	7	12	1	5	3	4	13	4	2	4

Notes: N=21 studies. *Indicates intervention without pure control group

Appendix Table 4. Value for money and cost-effectiveness

Country	Study	Transfer modality	Transfer schedule (\$US)	Payments	Transfer frequency	Length exposure	Total value (\$US)	Cost Efficiency
DRC	(Aker, 2017)	Cash Transfer	US\$ 90 & US\$ 20 & US\$ 20	Multiple	Three times per household	6 months	US\$ 130	US\$ 11.34 per recipient
DRC	(Aker 2017)	Cash Voucher	US\$ 90 & US\$ 20 & US\$ 20	Multiple	Three times per household	6 months	US\$ 130	US\$ 14.35 per recipient
DRC	(Quattrochi et al. 2020)	Non-food Voucher	US\$55–\$90	Multiple	Per household per month	12 months	US\$ 660 - 1080	US\$ 14.53 per beneficiary
DRC	(Bonilla et al., 2017)	Cash Transfer (Single)	US\$ 120	Single	One time per household	24 months	US\$ 120	Value not reported
DRC	(Bonilla et al., 2017)	Cash Transfer (Multiple)	US\$ 60 & US\$ 30 & US\$ 30	Multiple	Per household	24 months	US\$ 120	Value not reported
Ecuador	(Hidrobo et al. 2014)	Food Transfer	US\$ 40	Multiple	Per household per month	6 months	US\$ 240	US\$ 11.46 per transfer
Ecuador	(Hidrobo et al. 2014)	Cash Transfer	US\$ 40	Multiple	Per household per month	6 months	US\$ 240	US\$ 2.99 per transfer
Ecuador	(Hidrobo et al. 2014)	Food Voucher	US\$ 40	Multiple	Per household per month	6 months	US\$ 240	US\$ 3.27 per transfer
Ecuador	(Hidrobo et al. 2016)	Food Transfer	US\$ 40	Multiple	Per household per month	6 months	US\$ 240	Value not reported
Ecuador	(Hidrobo et al. 2016)	Cash Transfer	US\$ 40	Multiple	Per household per month	6 months	US\$ 240	Value not reported
Ecuador	(Hidrobo et al. 2016)	Food Voucher	US\$ 40	Multiple	Per household per month	6 months	US\$ 240	Value not reported
Ecuador	(Valli et al.2019)	Food Transfer	US\$ 40	Multiple	Per household per month	6 months	US\$ 240	US\$ 26 per beneficiary
Ecuador	(Valli et al.2019)	Cash Transfer	US\$ 40	Multiple	Per household per month	6 months	US\$ 240	US\$ 15 per beneficiary
Ecuador	(Valli et al.2019)	Food Voucher	US\$ 40	Multiple	Per household per month	6 months	US\$ 240	US\$ 14 per beneficiary
Ethiopia	(Gilligan and Hoddinott 2007)	Food Transfer	N/A	N/A	N/A	18 months	N/A	Value not reported

Ethiopia	(Gilligan and Hoddinott 2007)	Food for Work	N/A	N/A	N/A	18 months	N/A	Value not reported
Fiji	(Ivaschenko et al. 2020)	Cash Transfer	US\$ 300	Single	One time per household	Single instant	US\$ 300	Value not reported
Jordan	(Lombardini and Mager 2020)	Cash for Work	US\$ 118 - 200	Multiple	Per beneficiary per month	4 months	US\$ 500 - 1500	Value not reported
Lebanon	(Chaaban et al. 2020)	Cash Transfer (Discontinued)	US\$173.50 & US\$ 175	Multiple	Per household per month	12 months	US\$ 1392 - 4176	Value not reported
Lebanon	(Chaaban et al. 2020)	Cash Transfer (Short term)	US\$173.50 & US\$ 175	Multiple	Per household per month	4-12 months	US\$ 1392 - 4176	Value not reported
Lebanon	(Chaaban et al. 2020)	Cash Transfer (Long term)	US\$173.50 & US\$ 175	Multiple	Per household per month	16-22 months	US\$ 5568 - 7656	Value not reported
Lebanon	(Lehmann and Masterson 2014)	Cash Transfer	US\$ 147 & US\$ 107/month	Multiple	Per household [\$147 1st payment, then \$107/month (4 months)]	5 months	US\$ 575	Value not reported
Lebanon	(de Hoop 2019)	Cash Transfer	US\$ 20	Multiple	Per household per month	12 months	US\$ 240	Value not reported
Mali	(Aurino et al.2019)	Food Transfer	N/A	N/A	N/A	12 months	N/A	Value not reported
Mali	(Aurino et al.2019)	School Feeding	N/A	N/A	N/A	12 months	N/A	Value not reported
Mali	(Tranchant et al.2019)	Food Transfer	N/A	N/A	N/A	12 months	N/A	Value not reported
Mali	(Tranchant et al.2019)	School Feeding	N/A	N/A	N/A	12 months	N/A	Value not reported
Niger	(Aker et al., 2011)	Cash Transfer	US\$ 45	Multiple	Per household per month	5 months	US\$ 215	US\$ 12.76 per beneficiary
Niger	(Aker et al., 2011)	Mobile Money Transfer	US\$ 45	Multiple	Per household per month	5 months	US\$ 215	US\$ 13.65 per beneficiary
Niger	(Aker et al., 2011)	Cash Transfer & Phone	US\$ 45	Multiple	Per household per month	5 months	US\$ 215	US\$ 12.76 per beneficiary
Philippines	(Mercy Corps, 2015)	Cash Transfer (Single)	US\$ 89	Single	One time per household	6 months	US\$ 89	US\$ 0.56 - \$1.30 per transfer
Philippines	(Mercy Corps, 2015)	Cash Transfer (Multiple)	US\$ 45 & US\$ 27 & US\$ 16	Multiple	Per household	6 months	US\$ 89	US\$ 0.56 - \$1.30 per transfer
Philippines	(Mercy Corps, 2015)	Cash Transfer & Financial Overview	US\$ 45 & US\$ 27 & US\$ 16	Multiple	Per household	6 months	US\$ 89	US\$ 4.47 per transfer

Philippines	(Mercy Corps, 2015)	Cash Transfer & Financial Overview & Messages	US\$ 45 & US\$ 27 & US\$ 16	Multiple	Per household	6 months	US\$ 89	US\$ 6 per transfer
Sri Lanka	(Sandström & Tchatchua, 2010)	Cash Transfer	US\$ 6	Multiple	Per household per month	4 months	US\$ 24	More cost-efficient
Sri Lanka	(Sandström & Tchatchua, 2010)	Food Transfer	N/A	N/A	N/A	4 months	N/A	Less cost-efficient
Uganda	(Tusiime et al., 2013)	Food Transfer	N/A	N/A	N/A	12 months	N/A	Value not reported
Yemen	(Ecker et al., 2019)	Cash Transfer (Old Benef.)	US\$ 18.64	Multiple	Per household per month	12 months	US\$ 224	Value not reported
Yemen	(Ecker et al., 2019)	Cash Transfer (New Benef.)	US\$ 18.64	Multiple	Per household per month	12 months	US\$ 224	Value not reported
Yemen	(Kurdi et al., 2019)	Cash Transfer	US\$ 10/month & US\$ 30/month	Multiple	Per household [US\$ 10 for 9 months & US\$ 30 for 12 months]	24 months	US\$ 450	Value not reported
Yemen	(Schwab, 2019)	Food Transfer	US\$ 24.5 bi-monthly	Multiple	Per household bi-monthly	6 months	US\$ 147	US\$ 181.49 per beneficiary
Yemen	(Schwab, 2019)	Cash Transfer	US\$ 24.5 bi-monthly	Multiple	Per household bi-monthly	6 months	US\$ 147	US\$ 162.65 per beneficiary