

KULEA WATOTO

Nurturing Children

**BEST PRACTICES IN INTEGRATING NUTRITION IN ECONOMIC RECOVERY AND DEVELOPMENT /
FOOD SECURITY AND LIVELIHOOD INTERVENTIONS/PROGRAMS IN REFUGEE CONTEXTS**

EVIDENCE REVIEW AND SYNTHESIS



Mugisha M. Mutabazi, Katungi Juma, Ismael Nyanzi Ddumba, Kemi Richardson, Clare Bangirana,
Timothy Opobo, Alinaitwe Alex, Blessing James, Fitz Patrick

In partnership with



Best Practices in Integrating Nutrition in Economic Recovery and Development/Food Security and Livelihood Interventions/Programs in Refugee Contexts

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Executive Summary

Introduction

This evidence review set out to interrogate two questions: What is the linkage between livelihood programming, children's nutrition, and early learning? What are the best practices in integrating nutrition in Economic Recovery and Development (ERD)/food security and livelihood interventions/programs? Three sub-questions were developed from the third question to make it more specific: What are the best practices in program design/approach? What are the best practices in program implementation and operation(s)? What are the best practices proposed/suggested by guidelines on integrating nutrition in livelihood/food security interventions/programs? The review used the methodological framework for scoping studies by Arksey and O'Malley (2005) and took cognizance of improvements in the framework by Danielle Levac, Heather Colquhoun and Kelly K. O'Brien (2010); Levac et al. (2010); Tricco et al. (2018) and Peters et al. (2020). Both grey and published literature were identified for review in relation to the broad and specific questions stated above. A team of two researchers (a livelihoods expert and early childhood and development expert) and five research assistants identified relevant studies, selected/screened studies, and charted or extracted the data in an iterative manner. The findings of the review are presented following the three questions.



Photo: The AfriChild Centre

Question 1: What is the linkage between livelihood programming, children's nutrition, and early learning?

There is a paucity of research directly linking livelihood programming to children's nutrition and early learning. Available literature focuses either on livelihood programming (e.g. cash transfer programs) and children's nutrition or nutrition interventions and early learning. Findings underscore benefits/outcomes of CTs and their shortcomings. Generally, evidence indicates that:

- Combined interventions are more efficient than separate interventions because they make use of the same facilities, transportation and client contacts. Thus, KW project should seek to understand these resources to leverage them for better outcomes.
- Regarding integration of nutrition into ECD, evidence shows that livelihood programs such as capacity development and agriculture support have nutritional benefits for children and improve health, education, and household incomes.
- Integrated nutrition and ECD programs significantly increase dietary diversity of children and mothers. KW should pay attention to how ECD and nutrition are consciously aligned within the context of a two-generation approach to maximize its potential.
- The link between livelihood programming and nutrition outcomes of children is strengthened by nutrition education. The planned KW caregiver trainings and home-based ECD in urban and rural (refugee settlement) settings should integrate nutrition education.
- Livelihood programmes that incorporate asset provision and saving training into nutrition programming enable households safeguard the dietary needs of women and young children. Given that care-giver training on livelihoods is one of the major activities under the KW two-generation approach implies that emphasis should be placed on nutrition education.
- Integrated nutrition and ECD programs improve nutrition through enhancing diet diversity, reducing stunting, enabling families to invest in better child nutrition, increasing meal frequency, and reducing incidence of illness.
- Integrated programs with a CT component increase access to services by enhancing affordability and easing transport.
- There is limited evidence linking CTs to early learning and health in Africa. Some of the reasons include a collectivist culture that encourages spending on productive assets that benefit

- everyone in the family rather than consumption or children's needs such as nutrition.
- Due to general poor quality education in rural areas, the effect of CTs may not be realized.
- The evidence shows that CTs generally improve food security, nutrition, and health service utilization. They increase dietary diversity, income growth, decrease stunting, and incidence of illness, reduce adverse coping mechanisms to food insecurity such as skipping meals, increase food consumption, consumption of larger quantity of quality food, reduce stunting, and improve linear growth of children.
- Mechanisms through which CT initiatives improve nutrition positively (other than health outcomes and use of health services) include enabling greater variety of dietary choices (e.g. consuming more foods derived from animals), reducing incidence of illness (e.g. diarrhea), lowering implementing costs compared to other modalities, allowing freedom of choice at the household level, enabling policy environments, and beneficiaries' preferred choice for cash.
- Despite the above, integrated programs are associated with limited impact in some contexts because nutritional outcomes are influenced by many exogenous factors that programs may not impact like hygiene, feeding practices, knowledge about what constitutes an appropriate diet, seasonality of malnutrition, and other livelihood resources and cultural beliefs.
- Program attributes (e.g. size of transfer; timeliness of disbursements) and diminished purchasing power also affect outcomes of CTs on children's nutrition and health.
- Although KW is not a transfer program, some financial support will be given to clients to boost saving groups (e.g. KRC in Kyaka II settlement) and IRC in Kampala. Thus, paying attention to factors that enable CTs to influence nutrition as well as the mechanisms through which an injection of cash into households impact nutrition (e.g. by reducing incidence of diseases) will be key during design and implementation.

Question 2: What are the best practices in integrating nutrition in economic recovery & development/food security and livelihood interventions/programs?

(a) Best Practices in Program/Intervention Design

Extant literature shows that there are several best practices in program design/approach that the KW project needs to pay attention to:

- **Take cognizance of the 12-point checklist** for the design and implementation of nutrition-sensitive programs/projects developed between 2013-14, by FAO and Committee on World Food Security; the 2017 FAO *guidelines/principles for integrating nutrition into food security and livelihoods* interventions in emergencies in Pakistan-that have been adopted world-wide; and the *conceptual framework on causes of undernutrition developed by UNICEF* in the 1990s.
- **Pay attention to type of intervention.** There are several types of livelihood and food security interventions that could be integrated in nutrition programming like nutrition sensitive agriculture, enhancement, diversification, substitution, climate-smart, social protection, and graduation interventions. Evidence shows that:
 - Due to varying positive outcomes on children's nutrition and early learning, it is difficult to single out the most preferable intervention that program designers should focus on.
 - The reviewed interventions have been implemented in different contexts, with different goals and objectives, under different circumstances. Without a study comparing outcomes of interventions, it is difficult to advocate for a particular intervention. Program designers should evaluate the evidence on outcomes of each intervention, its weaknesses in view of the goals, aims of the intended project, and the context where it will be implemented.
- Program designers should seek answers to questions pertaining to pathways or mechanisms that drive change; constraints that hinder the theorized pathways from delivering desired change; capacities/issues (intervention-specific, contextual, collaborative, technical) that could be leveraged to increase opportunities to realize theorized and desirable change; and factors that promote specific intervention types like political commitment, coordination of policies and programs, appropriate program design and delivery and multi-sectoral collaboration.
- **Pay attention to program characteristics.** Attributes such as program modality (cash, food, a combination of these; vouchers, multipurpose cash, etc.); regularity of program benefits; adequacy of benefit level; and targeting (gender, age, and other variable human characteristics) affect outcomes of interventions.
 - Available evidence shows that mixed modalities are associated with higher food security and nutrition and consumption; thus, combining cash and BCC can impact greatly on chronic undernutrition (e.g. by increasing consumption of dairy products by children, increasing intake of animal source foods, and reducing incidence of illness.)
 - Evidence also shows that multipurpose

cash can result in switching from informal to formal schooling and lower rates of child labor.

- Unconditional cash transfers improve consumption, child-wellbeing, and food security because this change in modality from restricted to unrestricted reduces the likelihood of households reselling food handouts.
- Regular transfers increase predictability and households' ability to manage risk and prevent negative coping strategies like buying food on credit and high food rationing. In contrast, delayed disbursement of transfers results in higher incidence of hunger.
- Adequacy of benefit (which has to do with the size of the transfer) has important implications on nutrition outcomes: higher benefits are associated with food security and increased consumption.
- Evidence on targeting shows that gender considerations are important for project outcomes, hence an important design issue. Targeting women increases their decision making power and can have positive outcomes on household welfare (e.g. increased purchase of household assets). This cultural context must be taken into consideration in targeting

women or men.

- Evidence also indicates that program design should consider vulnerability, household composition, household size, and poverty status of beneficiaries so that grants meant for children are less likely spent on collective commodities that secure everyone, than children's needs or nutrition.
- **Adopt a multi-sectoral approach.** To address malnutrition, it is recommended to adopt a multi-sectoral approach because of its capacity to leverage linkages and strengths or impacts of outcomes in different sectors (e.g. WASH, social protection on nutrition).
 - It is important to understand the local context and systems, mobilize local capacities, adopt a participatory approach, and build meaningful cross-sectoral collaborations.
- **Incorporate nutrition education** and behavior change communication in programs as evidence shows it enhances nutrition outcomes.
- **Other important design considerations** with implications for KW are community engagement, articulation of an evidence-based theory of change, adapting a program to context, programming holistically, forming partnerships, and training.



(b) Best Practices in Implementation/Operation of Integrated Nutrition and Livelihood Interventions

The review established that there are several best practices in implementation and operation of integrated nutrition and livelihood interventions with important implications for KW project:

- It is important to include a gender mainstreaming strategy focusing on gender equality sensitization, facilitating women to lead, and preventing sexual exploitation in the design and implementation of livelihood interventions (e.g. CTs).
- Targeting benefits (e.g. CTs) to women is likely to result in better nutrition and livelihood outcomes for children and better infant and young child feeding practices. This is because money received by women has more impact on children's nutrition than that of men (Zaslow, M; 2010)
- Promoting women's control over sale of agricultural products requires to support their ownership of productive assets (e.g. land and animals, and decision making).

- Livelihood support for men is also important to promote nutritional health in communities.
- Formation of partnerships by stakeholders, implementation of validated livelihood programmes, and addressing structural obstacles to refugees' abilities to become self-reliant is vital.
- Awareness of the political economy of nutrition-sensitive programs, specifically their development, harmonization and implementation, discerning interests, and competing incentives of different actors is critical.
- It is also important to understand the architecture and artifacts of nutrition governance systems to know what is happening on the ground, identify entry points and strategies, identify opportunities, resolve trade-offs, and strengthen nutrition-related pathways and outcomes.

(c) Best Practices in Self-Reliance, Skilling and Business Development

Based on evidence on broad ERD approaches such as self-reliance, training, skilling and business development among refugees and host communities, partners in the KW consortium might consider the following best practices:

- Building on existing coping and livelihood strategies of refugees to promote refugee self-reliance and recognizing inclusion and resilience-led approaches operating within entrepreneurial communities of refugees and host communities.
- Recognizing structural, institutional and individual enablers, and barriers of livelihoods of refugees, such as lack of access to land, limited access to capital and appropriate financing schemes, limited local actor involvement in the design and assessment of investment opportunities, inaccessible markets, poor road networks, limited public transport, discrimination, limited social networks, and poor relations between refugees and host communities.
- Involving private sector actors in refugee self-reliance (as envisaged under KW). Evidence shows that despite existing potential within the private sector, there is still limited involvement of the sector in refugee self-reliance strategy.
- Dealing with the mismatch between demand and supply of business skills through training as envisaged in the KW design, specifically, soft skills like communication (language skills), time management, establishing peer relationships, assertiveness, and encouraging more male participation in training.
- Skilling and other services should take into account the local context (cultural, social and economic), by for instance, developing a solid understanding of the needs and constraints of target communities and engaging with local communities and authorities. Use of locally and culturally relevant approaches will reduce acculturation dilemmas.
- Unbundling refugee services (e.g. training and skilling) from those of host communities as a strategy to target refugees appropriately given their unique circumstances.
- Contributing to designing and promoting a local model of business development service provision (including promotion of business incubators and ensuring their collaboration).
- Increasing access to information, reducing barriers of registering businesses, and standardising registration processes.
- Providing funds and business development services opportunities to formal refugee business owners and promoting policy reforms that enhance and support refugee businesses.
- Improving access to mobile phone technology and training refugee youth to utilise it given that mobile phones are a key component of the innovation ecosystem.
- Promoting participatory approaches to technology development and use through co-designing and co-creating with refugees.

Conclusions and Recommendations

This evidence review set out to interrogate two questions: *What is the linkage between livelihood programming, children's nutrition and early learning? What are the best practices in integrating nutrition in economic recovery & development/food security and livelihood interventions/programs?* There was a paucity of literature on integration of nutrition into ECD and ERD/livelihoods in refugee settings in LMICs. Thus, the review was expanded to consider literature on these subjects in humanitarian contexts in LMICs.

The evidence review emphasizes that it is crucial to understand how early learning, children's nutrition, and livelihood

programming are interconnected. Despite being mixed, evidence on the link between nutrition and livelihood programming, livelihood programming and ECD, as well as best practices of integrating nutrition in ERD and livelihoods, highlights the potential for livelihood interventions to positively impact children's health, education, nutrition, and cognitive development, in addition to improving household economic conditions. The evidence further indicates that financial assistance (e.g. cash transfers or other forms of income support) play a very important role in integrated ECD and ERD/food security and livelihood programs.

Photo: The AfriChild Centre

This review underscores that policymakers and practitioners can more effectively support the holistic development of children in low-income communities by incorporating these elements into comprehensive development programs. For example, two-generation programs like KW, whose goal is to support livelihood strengthening and resilience, whilst promoting ECD. In addition to the evidence being mixed, the review shows that the extant literature is short on the pathways or mechanisms by which expected changes (program outcomes) should occur as theorized in the project/program theory of change. Yet, to be able to monitor project process and outcome indicators, the pathways to change must be generally clear. Therefore, it is recommended that the Kulea Watoto project team examine carefully, the UNICEF conceptual framework and recent revisions made by Black et al. (2020); the conceptual pathways between agriculture and nutrition¹, as well as indicative pathways from social protection to nutrition², with a view to combining insights from these frameworks to improve its Theory of Change/program theory. The above conceptual frameworks are exception; however, they are not comprehensive. For instance, they do not shed light on pathways by which an agriculture intervention might produce desired nutritional outcomes or how training can lead to improved livelihoods. Also, they are silent (conceptually and practically) on how the effects of combined interventions might coalesce.

Finally, the review indicates that it is crucial to pay attention to social, cultural, political and institutional contexts. Context is implicated in almost all aspects of programs (e.g. design, adoption of a multi-sectoral approach, targeting, implementation, and community engagement). To ensure success of design and implementation of ERD/livelihoods, nutrition and ECD projects should consider contextual factors like nutrition policies, political economy, governance systems, institutions (e.g. the quality of education systems), and culture.

Opportunities for Future Research

Given the nascent state of the field and limited empirical evidence, more research is needed on the following:

- | | | | |
|--|--|---|---|
| 1. How best to design and implement integrated parent and child programs, ERD/livelihood, and nutrition/food security, specifically what intervention types and program characteristics are important. | 2. Assessment of pathways/mechanisms of change in integrated ERD/livelihoods and food security and ECD programs. | 3. Comparison of intervention types to find out ERD and livelihood interventions suitable to be integrated with nutrition in refugee/forced displacement contexts or LMICs. | 4. Evaluation of the level of effectiveness of integrated ERD/livelihood, and nutrition/food security and ECD programs. |
| | | 5. The political economy of combined/integrated ERD/livelihood programs and ECD interventions in refugee contexts or LMICs in general. | |

¹ Adapted for Feed the Future by Anna Herforth, Jody Harris, and SPRING, from Gillespie, Harris, and Kadiyala (2012) and Headey, Chiu, and Kadiyala (2011).
² Harold Alderman. (2016). "Leveraging Social Protection Programs for Improved Nutrition: Summary of Evidence Prepare for the Global Forum on Nutrition-Sensitive Social Protection Programs", 2015, World Bank, Washington, DC.

1.0 Introduction



Photo: The AfriChild Centre

1.1 Background

The International Rescue Committee is implementing a three-year project titled "Kulea Watoto" in Kampala, Yumbe, and Kyegegwa districts through a consortium of four partners the AfriChild Centre, Kabarole Research and Resource Centre (KRC), Literacy and Adult Basic Education (LABE), and Madrasa Early Child Hood Care Programme. The overall aim of the project is to improve access to quality early childhood care and development for children aged 5 and under in refugee and host communities in Uganda. Specifically, the project seeks to:

1. Empower Households with Responsive Caregiving and Early Learning Skills,
2. Improve Economic Wellbeing and Household Income Generation Opportunities,
3. Improve the Availability of Quality ECCD Services,
4. Advocate for an Enabling Environment for quality ECCD service provision.

The role of the AfriChild Centre in the consortium is to spearhead all research and learning activities of the project in close collaboration with other partners. This evidence review, aimed at informing program design, is the first research activity conducted by the AfriChild Center under its mandate.

1.2 Objectives of the Evidence Review

This evidence review seeks to generate evidence on the following:

1. The relationship between livelihood programming, children's nutrition, and early learning.
2. Best practices in integrating nutrition in ERD/livelihood and food security interventions.

The remainder of this report is organized as follows: section 2 discusses the methodology, section 3 presents the findings/results (results will be presented in line with the above research questions). Section 4 discusses the findings, followed by a conclusion.

2.0 Methodology

2.1 Scoping Review

A scoping review of literature on the two questions identified above was undertaken. The team mapped both grey and peer reviewed literature focusing primarily on refugee situations in Uganda and other Low and Middle Income Countries (LMICs). Given the exploratory nature of the review, the team did not evaluate the quality of the articles/materials reviewed, for example their rigor, nor their sources. Rather, it focused on extracting the evidence that could answer the research questions.

Scoping reviews were inspired by the publication of a methodological framework by Arksey and O'Malley (2005). Since then, scoping reviews and the methodology for conducting them have advanced greatly (see Danielle Levac, Heather Colquhoun and Kelly K. O'Brien (2010)). The scoping review team considered improvements to the original Arksey and O'Malley (2005) framework by Levac et al. (2010), Tricco et al. (2018), Peters et al. (2020). The methodology proposes six main stages for conducting a scoping review namely, identifying the research questions; identifying relevant studies; study selection; charting the data; collating, summarizing, reporting the results; and consultation. Although Arksey and O'Malley (2005) stated that consultation is optional, subsequent scholars have advised that it should be integral to the proper conduct of scoping reviews (Levac et al. 2010). Levac et al. (2010) argue that researchers should make explicit the reasons for the consultation, specify

the type of stakeholders to consult and how data will be collected, analyzed, reported and integrated within the overall study outcome.

In line with Arksey and O'Malley, these scholars noted that the scoping review methodology needs to be conceived as iterative rather than linear. This review adopted this stance. Findings from the initial review have resulted in searching for new literature to fill in gaps, clarify themes and/or articulate some ideas better. The above stages and how they were implemented in this scoping review are described in detail below:

2.1.1 Identifying the research questions

The guidance proffered in Peters et al. (2020), concerning formulation of the research question, will be adhered to. These scholars posited that a research question for a scoping review should incorporate elements of the population, concept and context (PCC). This PCC mnemonic helps in "identifying the focus and context of the review... guides the development of specific inclusion criteria, facilitates the literature search, and provides a robust structure for the development of the scoping review" (p.2122). The populations under consideration in the proposed review are "refugees", "children," and "caregivers". The concepts under review are "early childhood development," "early learning" "livelihood interventions" "integration", "children's nutrition," and "best practices." The geographical context is "Uganda" and "LMICs", while the program context is "refugee settings/situations" and "emergency settings/situation."



Photo: The AfriChild Centre

Two research questions guided the review:

1. What is the linkage between livelihood programming, children's nutrition, and early learning?
2. What are the best practices in integrating nutrition in economic recovery and development/food security and livelihood interventions/programs?

Three sub-questions were developed from question three to make it more specific. They are:

- a. What are the best practices in program design/approach?
- b. What are the best practices in program implementation and operation(s)?
- c. What are the best practices proposed/suggested by guidelines on integrating nutrition in livelihood/food security interventions/programs?

The above questions are reflected in the general and specific objectives of the study. As stated earlier, given that this review explores two different and broad questions, it is anticipated that more focused questions might emerge as greater insight is gained by the reviewers. Hence, the above questions are tentative.

2.1.2 Identifying relevant research studies

Both grey and published literature was identified for review in relation to the broad and specific questions stated above. A team of three researchers (a livelihoods expert, early childhood and development expert, and monitoring and evaluation expert) and five research assistants identified relevant studies, selected/screened studies, and charted or extracted the data. The researchers identified both grey/unpublished and published literature using various electronic databases and internet search engines like google scholar.

- Primary documents such as project reports, public/government documents, reports by UN agencies (including UNHCR, the Food and Agriculture Organization of the UN (FAO), the World Food Programme of the UN (WFP), UNICEF, and the World Health Organization and NGOs (international and local).
- Further, secondary literature was obtained using different electronic databases such as JSTOR, Science Direct, Scopus, and EBSCO host. In addition, online search engines and libraries like Google scholar, library genesis and others were explored. In particular, journals focused on forced displacement (e.g. the Journal of Refugee Studies, the Journal of Immigration and Refugee Studies), ECD, and nutrition research (e.g. the Emergency Nutrition Network) were explored.

- Initial search terms that guided the search for online literature were derived from the research questions. The team also conducted hand searches and skimmed reference sections/citations of documents for more, and relevant documents. Various Boolean terms and connectors such as "Early Childhood Development AND Nutrition," "Livelihood Programming AND Best Practices AND refugees" etc. were used. For each question, further specialized search terms/ strategies were developed. Arksey and O'Malley (2005) suggested that "as familiarity with the literature is increased, researchers will want to redefine search terms and undertake more sensitive searches of the literature" (p.22). Hence, the above search terms were suggested not as an exhaustive but tentative list. Following the advice offered by the above authors, no "strict limitations [were placed] on search terms, identification of relevant studies, or study selection at the outset." (p.22)

In view of the complexity of conducting literature searches, we engaged a professional librarian to help refine the techniques of data searches, and to suggest additional data sources including data bases and studies. The overall strategy for conducting the scoping review was reflexive to ensure that the literature is covered comprehensively (Arksey and O'Malley 2005).

2.1.3 Study selection

After conducting the initial data search, a protocol detailing inclusion and exclusion criteria was developed to guide the document selection process. **Documents/articles were included if they were:**

- Rated to be relevant by three reviewers.
- Ten years old or below (if it provides unique findings on review question).
- Empirical/present research findings
- Synthesis/evidence reviews
- Policy/technical guidelines (especially for the question on best practices)
- Cover refugee situations in Africa (priority to similar contexts)
- Cover refugee situations in LMICs (in case those covering Africa are inadequate)
- Present findings of research on review questions from LMICs, (in case those on refugee contexts are inadequate)
- Present general findings from the developed world that may apply to the review questions 2 and 1.
- Reports and program documents from implementation partners in the consortium (IRC, Agakhan, LABE & KRC)

Initial documents obtained using the above search terms were uploaded onto a google doc. file to enable reviewers to access and scan them for eligibility. Three research assistants (EN, AH, KR)³ rated the relevance of documents (yes/no); their rating/scoring was approved by three lead researchers (MM, KJ)⁴. The following techniques were used to select documents for initial review:

- a) A title and abstract/executive summary review:** during this initial process, three researchers separately reviewed the literature yielded from the search to determine eligibility based on the defined inclusion and exclusion criteria. Differences were discussed among all researchers to reach consensus.
- b) A full text review** was conducted on literature selected from the title and abstract review (this followed guidelines for annotation attached as appendix I);
- c) A hand search** was conducted using the reference lists of included studies/reports to identify additional relevant articles/studies for review;

2.1.4 Charting and Extracting the Data

Data was extracted in line with the objectives and research questions of the scoping exercise. A data extraction table to guide this process of charting the data was designed. It contained information such as: author, type of document, citation, results and findings relevant to the research questions. As mentioned above, 3 researchers and 5 research assistants participated in this process to ensure quality (Peters et al. 2020). The reviewers met regularly to discuss challenges and resolve uncertainties and update the data extraction chart in an iterative process (Levac et al. 2010).

³ EN=Elizabeth Nayebare; AH=Asabahebwa Hilary; KR=Kemigisha Richardson
⁴ MM=Mugisha Marion; KJ=Katungi Juma

2.1.5 Collating, summarizing, and reporting the results (data analysis and reporting)

Thematic (Braun and Clarke 2006) and qualitative content analysis (Marrying 2004) was used to analyze data in the literature extracts. Analysis techniques involved inductive and deductive approaches. Six guidelines proposed by Braun and Clarke (2006) namely: familiarizing with the data; generating codes; searching for themes; reviewing themes; defining and naming themes; and writing a report (p.86-93), were employed during thematic analysis. To operationalize these procedures, data extracts were read twice to gain a deep understanding of the entire data set before embarking on coding (James 2013). The data was coded by two research assistants (EN&AH) using a three-step coding strategy involving descriptive, process and focused coding (Saldaña 2013). The coding was checked by the two researchers (MM&KJ), and any divergences and/or disagreements in coding were resolved by them. These coding strategies led to searching for themes and reviewing them at the level of coded extracts and in the entire data set. Finally, themes were defined, named and written up (Braun and Clarke 2006). Themes were also included based on the criterion of prevalence. Prevalence was judged by the presence of an idea in the extracts/ annotations (Braun and Clarke 2006).

Reporting of the results refers to the overall purpose of the review and research question. The PCC mnemonic and the PRISMA-ScR checklist (generally) guided the reporting of findings. Where necessary, diagrams such as tables or flow diagrams are used to report the data. The meanings and implications of the findings for improving the design process are highlighted in line with the overall purpose of the review (Peters et al. 2020).

3.0 Results/Findings



3.1 What Is the Linkage between Livelihood Programming, Children's Nutrition and Early Learning?

3.2. Introduction

There is a paucity of research linking livelihood programming, children's nutrition and early learning. Existing literature focuses either on livelihood programming and children's nutrition, or nutrition interventions and early learning. Further, a health sector paradigm informs the current frameworks for guiding nutrition interventions, which do not fully leverage agricultural aspects (Duncan et al. 2022) multi-sectoral strategies to improve nutrition are necessary. Building towards this goal, the food and agriculture sector must be considered when designing nutritional interventions. Nevertheless, most frameworks designed to guide nutritional interventions do not adequately capture opportunities for integrating nutrition interventions within the food and agriculture sector. This paper aims to highlight how deeply connected the food and agriculture sector is to underlying causes of malnutrition and identify opportunities to better integrate the food and agriculture sector and nutrition in low and middle income countries. In particular, this paper: (1. In view of these observations, the response to the above question is presented under two rubrics namely: livelihood programming and children's nutrition (under this, the review underscores the salient role of cash transfers) and integration of nutrition into early childhood development.

3.2.1 Livelihood Programming and Children's Nutrition

Combining livelihood programming and nutrition programming i.e. nutrition-sensitive livelihoods (Estrada et al., 2020) are more efficient than separate interventions, because they make use of the same facilities, transportation, and client contacts (Digirolamo et al., 2014). But according to Berti et al. (2004), despite the fact that the link between livelihood programming and nutrition outcomes of children is strengthened by nutrition education, the investment in human capital is neither sufficient nor always necessary. This section presents findings on the relationship between cash transfers (CTs) and children's nutrition, and those focusing on integration of nutrition into early childhood development. CTs can be conditional or unconditional. They can be implemented as single interventions or combined with other interventions. CTs are associated with several benefits like enhancing food security and nutrition, health and educational outcomes. However, they have some weaknesses. For example, there is limited evidence linking CTs to early learning and health in Africa. Collectivist culture encourages spending on productive assets that benefit everyone in the family over consumption, due to general poor quality education in rural areas. Due to this, the effect of CTs may not be realized, and CTs do not necessarily increase school attendance. With regard to integration of nutrition into ECD, evidence shows that livelihood programs have nutritional benefits for children, improve health, education, and household incomes.

3.2.2 Cash Transfers (CTs) and Children's Nutrition

Interventions to reduce the effects of a cost of living crisis include humanitarian cash transfers and social safety nets. Gaps in a country's safety nets can be bridged by humanitarian aid in the form of cash transfers, but up to now, this support has been insufficient and largely restricted to camps or rural settlements (Odokonyero, 2022). Although there is a push for cash-based programming in humanitarian aid, in-kind transfers continue to be the predominant method (Kurdi, 2021), due to a paucity of resources (Bailey, 2016). This notwithstanding, cash transfers can be up to 25% less expensive than in-kind assistance (Bailey, 2016).

Food Security and Nutrition Benefits of Cash Transfers. In humanitarian settings, cash transfers can result in more varied diets for young children and better nutritional outcomes for the most disadvantaged children (Kurdi, 2021). The most nutritionally vulnerable households could benefit from financial support to increase access to goods and services and promote adoption of good feeding and care practices (UNICEF, 2023). Further, cash transfers can address a variety of child vulnerabilities, including causes of undernutrition in children; specifically, they increase uptake of numerous essential services (UNICEF, 2023).

According to Bailey (2016), a single cash transfer, rather than separate grants or vouchers from the WFP and UNHCR for food or other specific items, would help refugees meet their basic needs, be significantly less expensive than in-kind aid, and is most preferred by refugees. In



The results of this research also showed that the cash transfer program had a significant positive association with nutrition security among the camp's refugees (Lumumba et al., 2022).

20%

Alderman (2014) argued that CT programs have a 20% impact on nutrition than Growth Domestic Product (GDP) growth alone and can reduce stunting by 12% among program beneficiaries

a study carried out in Kenya, the Kakuma camp's cash transfer program helped refugees in terms of nutrition security. Cash transfers could also stop or reduce negative coping strategies aimed at dealing with food insecurity like skipping meals (Lumumba et al., 2022).

When compared to food rations, cash transfers may increase dietary diversity because cash can be used to buy any kind of food (Kurdi, 2021; Bailey, 2012). In a study conducted in Yemen, Kurdi (2021) found that a cash for nutrition intervention significantly increased purchases of non-staple foods, resulting in significant improvements in child dietary diversity scores. The study found that increases in the consumption of non-essential food items, particularly animal source proteins (meat, fish, eggs, and dairy), accounted for the vast majority of the value of the transfers (Kurdi, 2021). Hoddinott et al. (2020) established that households that received an e-voucher consumed a larger number of food groups than households that received General Food Distribution (GFD), meaning that children may have consumed more diverse diet. These findings echo research by Bailey (2012) which ascertained that cash transfers increase dietary diversity.

Macpherson and Sterck (2019) found that a switch from food rations to cash transfers and widened small-scale agriculture in the Kalobeyei refugee settlement led to dietary diversity, calorie intake, food security, perception of happiness, and independence in the short run. However, they noted that these outcomes were not as a result of differences in employment, accumulation of human or physical capital, access to finance or remittances. Rather, improvements in dietary variety and food security than calorie intake, were partly attributed to involvement in kitchen gardens. This development model/approach aimed at promoting refugee self-reliance through income-generating activities, market development and cash transfers was noted to be cheaper, yet effective (Macpherson & Sterck, 2019). Dietary diversification and modification, in conjunction with nutrition education, focus on improving the availability, access to, and utilization of foods with a high content and bioavailability of micronutrients throughout the year (Digirolamo et al., 2014).

Cash transfers also indirectly increase food consumption by funding income-generating livelihoods (Lumumba et al., 2022) "non-dropping-particle": "" , "parse-

names":false,"suffix":""]],"container-title":"The International Journal of Social and Development Concerns (IJSDC. A cash transfer made it possible for refugees, especially children, to attend school because they were able to eat at least some food from home (Lumumba et al., 2022). The results of this research also showed that the cash transfer program had a significant positive association with nutrition security among the camp's refugees (Lumumba et al., 2022). Additionally, households use cash transfers to purchase larger quantities of better-quality (more nutrient-dense and diverse) food, which frequently results in an improvement in household food security indicators (Groot et al., 2015).

In "Can transfer programs be made more nutrition sensitive?" Alderman (2014) argued that CT programs have a 20% impact on nutrition than Growth Domestic Product (GDP) growth alone and can reduce stunting by 12% among program beneficiaries. Further, CTs can reduce stunting national wide by 1-2%. According to Alderman this is possible because households use program transfer income differently than other income on food decisions because of labelling attached to the program money. To demonstrate this, he used an example of a food-for-education program in Burkina Faso that registered a remarkable larger impact on the weight for age of children (6-60 months). However, Alderman (2014) concluded that few programs have such impact on stunting or anemia, especially in Africa with high levels of malnutrition and poverty.

Social cash transfers have a significant impact on food security, not only by increasing

consumption but also by improving diet quality and reducing the severity of food insecurity experiences (Hjelm, 2016). "Cash for nutrition" programs give cash or transfers that resemble cash to households that are at risk in order to increase their access to nourishing foods and improve the nutritional status of their children. These initiatives work to reduce hunger and poverty with a focus on bettering children's nutrition.

Hoddinott et al. (2020) examined food transfers, electronic food vouchers, and child nutrition status among Rohingya children aged between 6-23 months in Bangladesh. The study reported an association between an e-voucher and linear growth of children. The authors noted that increased women's control over the transfer and ability of the household to make the transfer last until the next payment explained the linear growth. The study found an increase in HAZ of 0.38SD with receipt of an e-voucher. Despite the above, there was no association between the intervention and measures of acute undernutrition or other anthropometric outcomes. Children in households receiving the food ration had poorer height-for-age z scores (HAZ) and were likely to be stunted 36% compared to 27% of children receiving the e-voucher. Further, there was no association between e-voucher and stunting as well as weight (as measured by weight-for-height z scores (WHZ)), and acute undernutrition (as measured by wasting, WAZ or mid-upper arm circumference (MUAC)). There was, however, evidence of positive association between electronic food vouchers and height-for-age z scores.



Photo: The AfriChild Centre

The researchers associated poor hygiene conditions with poorer WHZ, although that could not be directly associated with e-vouchers or GFD. They concluded that transitioning from food rations to electronic food vouchers does not adversely affect child nutritional status (Hoddinott et al., 2020).

Research by Seidenfeld et al. (2014) demonstrated that CTs lead to reduction in acute malnutrition. For example, in Zambia, an unconditional cash transfer of about USD12 per month for households with children under five improved household consumption, food consumption, diet diversity and food security (Seidenfeld et al., 2014). The cash transfer increased household consumption by 15.18 kwacha, committed to food consumption and purchase of more protein foods than roots and tubers. Further, the programme increased food security because households were able to buy more food and eat more times a day. Seidenfeld et al. (2014) reported that coupled with other appropriate behaviours, the cash transfer registered positive results on weight-

for-age, and weight-for-height at 10% not 5% for households only with access to clean water and educated mothers. Additionally, the programme reduced stunting by 9% in households with access to clean water, and by 1.2% for each additional year of education for the mother. It also reduced the incidence of diarrhoea by 4.9% (Seidenfeld et al., 2014).

The evidence above shows that CTs, generally improve food security and nutrition: they increase dietary diversity, reduce adverse coping mechanisms to food insecurity such as skipping meals, increase food consumption, consumption of larger quantity of quality food, reduce stunting, and improve linear growth of children. Factors that enable cash transfers to influence nutrition positively, other than health outcomes and use of health services, include lower implementing costs compared to other modalities, freedom of choice given at the household level, enabling policy environments, and beneficiaries' preferred choice for cash (van Daalen et al., 2022).

Health Benefits of Cash Transfers. Cash transfers have positive effects on psychosocial and mental health. They reduce stress initially caused by financial burdens, although some beneficiaries of cash transfers also socially exclude themselves from the public because of verbal abuse from non-beneficiaries (van Daalen et al., 2022). This finding is confirmed by Martina et al (2017), who observed that CTs increase access to employment and indirectly, psychological welfare due to enhancing ability to pay for secure housing: "being able to pay rent has a positive impact on mental wellbeing of many recipients, for both men and women.... this type of social protection instrument can improve mental health and reduce stress and symptoms of depression" (p. 4-5).

Additionally, CTs positively influence maternal and child health care utilisation, but not in postnatal care, home visits and facility delivery. Cash transfers combined with health education led to increased monthly medical spending and outpatient visits in some areas. Notably, in economic hardships like Covid-19, cash transfers improved healthcare utilisation and covered part of costs of treatment (van Daalen et al., 2022).

Weaknesses of Cash Transfers. Despite the emphasis on the beneficial effects of cash transfer programs in increasing resources for food, health, and care there is limited evidence as to whether cash transfers can have a positive effect on growth-related outcomes in children, especially in sub-Saharan Africa (Groot et al., 2015). These are influenced by both exogenous factors like hygiene and feeding practices, cultural beliefs, knowledge about what constitutes an appropriate diet, and the seasonality of malnutrition. Extreme poverty and hunger also mediate the impact of CTs.

Structural factors and context also determine the effects of CTs on nutrition. For example, CTs have limited impact in Africa compared to Latin America (see Garcia & Moore, 2012). According to Manley and Slavchevska (2019) only two out of twelve programs in Africa showed positive impacts on anthropometric outcomes, whereas four out of six livelihood programs in Latin America led to improvements in height for age and stunting⁵.

In Zimbabwe, an exploration of the pilot and scaled-up phases of the Harmonized Social Cash Transfer program to determine impact on under-eight children's access to food, education, and health services reported disappointing results. Findings suggested that caregivers spent money on commodities that benefited the household collectively than ECCE needs of children. Further, the education needs of children under five were reportedly neglected at the expense of those above five years who were about to sit for public exams. Thus, enrolment of three to four year olds remained low (Nyamukapa, 2016). Beneficiary caregivers reported preference for spending money in productive activities than only on consumption, which undermined children's nutrition. The needs of children were compromised by their weak bargaining power within households (Nyamukapa, 2016).

An evaluation report on cash-based transfers for refugee and host communities in Kenya reported purchase of lower nutritious foods, poor dietary diversity and food consumption scores in some refugee settlements compared to host communities despite the cash-based programme (UNU-MERIT, 2018). This was attributed to inadequacy of transfer values as a result of ration cuts, delayed disbursement, long intervals of food/CBT, and diminished

purchasing power in some refugee settlements (UNU-MERIT, 2018).

Concerning the impact of cash transfers on diet and nutrition, van Daalen et al. (2022) reported that although most studies have previously reported decrease in acute malnutrition as a result of cash transfers compared to in-kind food and food vouchers, few studies suggest consumption of less calories among cash beneficiaries than in kind food beneficiaries. Despite this, the researchers noted that conditional and unconditional cash transfers have mixed (though tending toward positive) results on health outcomes and use of health services in humanitarian settings except in the DRC. For example, multiple purpose cash transfers registered general improvements in health, nutrition and housing in Cameroon and Afghanistan; while in Kenya, they improved nutrition, subjective wellbeing and independence from aid (van Daalen et al., 2022). Where cash transfers failed to stimulate positive health outcomes (e.g. in DRC), the constraining factors included barriers to accessing cash by some beneficiaries because of age or gender due to programming and transport, weak health service infrastructure, reduced onsite access, dysfunctional markets or limited market choices and corruption (van Daalen et al., 2022).

All in all, exogenous factors such as hygiene and feeding practices, knowledge about what constitutes an appropriate diet, the seasonality of malnutrition, contextual and cultural factors (e.g. collectivist beliefs that might promote hedging against risk for the family than spending on nutrition), and program attributes (e.g. size of transfer, timeliness of disbursements and diminished purchasing power) affect outcomes of CTs on children's nutrition and health.

3.2.3 Integration of Nutrition into Early Childhood Development

Livelihood programming is a comprehensive approach to development that aims to improve household wellbeing by assisting people to meet basic needs and achieve economic and social objectives. Agricultural extension, career training, and microfinance are few examples of activities often included in livelihood programming. Programs for cash transfers are widely used to reduce poverty and give vulnerable families with children safety nets (Manley et al., 2020). Mechanisms through which CT initiatives aimed at families with young children decrease stunting include enabling greater variety of dietary choices (e.g. consuming more foods derived from animals) and reducing incidence of illness e.g. diarrhea (Manley et al., 2020).

Integrated child development and nutrition interventions are a crucial aspect of sustainable development which, potentially promotes the health and development of infants and young children (Black & Dewey, 2014). There is a growing understanding of the necessity for integrated strategies that incorporate livelihood programming with nutrition-sensitive and early childhood development interventions to optimize the impact on children's wellbeing. The benefits that result from combining these factors can result in more thorough and long-lasting improvements in young children's nutrition and early development (Abdullahi et al., 2021). When nutrition sensitive programs and nutrition-specific interventions are combined (e.g. agriculture, WASH, and behavior change), the effects on both nutritional and non-nutritional outcomes are stronger than when either intervention is used alone (Abdullahi et al., 2021). For example, according to (Wegmüller et al., 2022) such interventions boost child

⁵ Whereas some cash transfer programs are geared toward meeting basic needs (e.g. those provided in emergency situations), others have been used in the development context (see Garcia and Moore 2012:3)

development and growth, especially among children below two years.

Agriculture and livelihood projects, for instance, the USAID funded "Increasing Smallholder Productivity and Profitability (ISPP) project". This project focused on improving food supply chains through establishment of kitchen gardens and agriculture trainings to produce targeted nutrient-rich commodities, and gender-responsive market development through contract farming and agribusiness training, incorporate nutrition into a variety of areas, such as the choice of gender and nutrition-sensitive inputs and training in practical nutrition education (FAO, 2021). Some of the mechanisms/pathways to change in such interventions include targeting the same populations, and utilizing the same resources, such as facilities, transportation, and client contacts (Abdullahi et al., 2021).

Integrated nutrition and ECD programs have a greater cumulative impact on nutrition and ECD outcomes than single-sector interventions (Maalouf-Manasseh et al., 2016). According to these researchers, investing in integrated nutrition and early childhood development programming during the first 1,000 days of a child's life is critical to ensuring that they reach their full potential. Nutrition and ECD integration may result in cost savings from joint implementation (Hurley et al., 2016) and has been found to enable families to invest in better child nutrition and learning/play materials (Hurley et al., 2016).

Livelihood programmes that incorporate asset provision and saving training into nutrition programming enable households safeguard the dietary needs of women and young children (Kang et al., 2023). The programmes improve child

nutrition along the impact pathway of nutrition sensitive agricultural programming (Kang et al., 2023). According to a study conducted in Ethiopia, a cash transfer program for vulnerable households resulted in a significant increase in the height-for-age of children under the age of five. In Malawi, a program that educated mothers on sustainable agricultural and nutritional practices reduced the prevalence of stunting in children (Luseno et al., 2014). Woldehanna et al. (2017) found that early investments in children's health and nutrition up until age five in Ethiopia were crucial for their cognitive development. Further, they found that stunting has a discernible detrimental impact on children's cognitive development between the ages of five and eight.

Research conducted in Bangladesh revealed that



integrated programming significantly increased the dietary diversity of children and mothers (Kang et al., 2023). Programming that involves cash transfers has been reported to improve child nutrition and food security. For example, food security increased in eight SSA programs (Ethiopia, Kenya, Lesotho, Malawi, Mozambique, South Africa, Uganda, and Zambia) as a result of receiving CTs because the majority of the transfer income was used for food (Groot et al., 2017). Further, participation in CTs was linked to improvements in children's health, education, and income growth in Uganda (Dietrich et al., 2020). Social cash transfers have a positive impact on the number of meals consumed per day, and quality of food (Hjelm, 2016). According to Bailey and Hedlund (2012), they may have an immediate impact on food consumption by enabling households to use the extra income to increase the quantity, quality, and variety of food consumed. Also, CTs may prevent or mitigate negative responses to food

insecurity, such as skipping meals (Bailey & Hedlund, 2012).

The link between livelihood programming and child development was also supported by a study conducted in Malawi, which found that children in households receiving cash transfers had 37% fewer chances of getting sick than those in non-beneficiary households (Luseno et al., 2014). Cash transfers delivered in conjunction with 'plus' interventions have been shown to improve child diets, uptake of multiple and essential services, childcare, and feeding practices (UNICEF, 2023).

A study that assessed the impact of unconditional cash transfer programs on health and health-seeking behaviors in five African countries found that the programs greatly impacted health service utilization (Novignon et al., 2022). CTs facilitate access to services by enhancing affordability and easing transport challenges. According to research done in Yemen, the "Cash for Nutrition" intervention, which targeted households with young children and gave a CTs and nutritional training, significantly increased purchases of non-staple foods, resulting in a significant positive impact on children's dietary diversity assessment (Kurdi, 2021). A study conducted in Ghana found that community-prioritized intervention programmes improve nutritional intake and help reduce micro- and macro-nutrient deficiencies (Dalaba et al., 2022).

Photo: The AfriChild Centre

Evidence further suggests that programs working collaboratively or achieving shared leadership with a community lead to behavior change and cost-effective sustained transformation to improve critical health behaviors and reduce poor health outcomes like child under nutrition and poor Early Childhood Development (ECD) in low- and middle-income countries (Farnsworth et al., 2014). A study conducted in Ghana showed that nutrition-sensitive livelihood interventions are preferred to other interventions by beneficiaries. The research demonstrated that poverty, lack of irrigated agricultural land, and poor harvests were perceived to be the main barriers to optimal nutrition (Dalaba et al. 2022).

Shortcomings of Integrated ECD Programs

Research by Ali et al. (2022) did not find any significant impacts of nutrition counselling, unconditional cash transfer, and nutrition counselling combined with unconditional cash transfer on child wasting, underweight, stunting, food security or household expenses in Somalia. Another study in rural Ethiopia found that nutritional outcomes were dependent on more than just access to food and other livelihood assets (Busse et al., 2017).

According to Manley and Slavchecska (2019), research from Africa suggests limited association between livelihood programming

and early learning. An unconditional cash transfer implemented in Zambia had limited impact on early learning: it did not improve school attendance of children from programme households, and only a few of those that enrolled made it past the eighth grade (Siedenfeld et al., 2014). This is unsurprising given Stevens et al. (2023) observation that early childhood education and care resources can be extremely scarce, and providing high-quality early childhood education and care to refugee families in resource-limited settings can be extremely difficult.

In general, integrated nutrition and ECD programs improve nutrition through enhancing diet diversity, reducing stunting, enabling families to invest in better child nutrition, increasing meal frequency, and reducing incidence of illness. Integrated programs increase purchase of non-staple foods; programs with a CT component increase access to services by enhancing affordability and easing transport. Despite the above, integrated programs have been associated with limited impact in some contexts due to the fact that nutritional outcomes are influenced by many factors that programs may not impact (e.g. other livelihood resources and cultural beliefs).



Children in households receiving cash transfers had 37% fewer chances of getting sick than those in non-beneficiary households in Malawi (Luseno et al., 2014).

3.3 What Are the Best Practices in Integrating Nutrition in Economic Recovery & Development/Food Security and Livelihood Interventions/Programs?

3.3.1 Introduction

Despite a growing awareness about the importance of integrating nutrition in food security and livelihood interventions, there is limited information and guidance (preferably informed by practice) about how to do this. The goal of this evidence review was to document best practices of how to integrate nutrition in livelihood and food security programs/interventions. This section discusses principles and guidelines to integrate nutrition into food security and livelihood interventions and best practices in program design (which covers intervention types, adoption or use of a multi-sectoral approach, incorporation of nutrition education and behavior change into program design, community engagement, articulation of a theory of change, and the need to pay attention to various program characteristics). Further, it presents evidence on best practices in implementation of integrated interventions (including integration of food, nutrition, health, and WASH, gender and equity considerations, formation of partnerships, training and coping, and policy support) and other ERD and livelihoods programming best practices.

3.3.2 Guidelines to Integrate Nutrition into Food Security and Livelihoods Interventions

Much progress has been made in conceptualizing integration of nutrition into food security and livelihood interventions. Initial efforts by the Committee on World Food Security, FAO (2013), and Committee on World Food Security (2014), developed the following program design and implementation checklist for nutrition-sensitive programs/projects:

1. Support small scale farmers to improve productivity and profitability whilst protecting natural resources through soil, water, and biodiversity conservation;
2. Respect cultural heritage and traditional knowledge, and support diversity and innovation;
3. Empower women, the primary caretakers in households, through: (i) increased discretionary income, especially via increased attention to crops/livestock grown by women; (ii) improving women's access to extension services, financial services, technology, inputs, markets and information; (iii) avoiding harm to their ability to care for children; (iv) investing in labor- and time-saving technologies targeted to women; (v) adding programme components to enable high-quality child care; and (vi) advocating for policies to support women's rights to land, education and employment;
4. Diversify production and livelihoods for improved food access and dietary diversification, increase production of nutrient-dense foods, particularly locally adapted varieties rich in micronutrients and protein;
5. Reduce post-harvest losses and improve processing to increase and prolong access to and consumption of diverse foods among both producers and consumers, to preserve or increase nutrient content of food, to increase income and profit margins and to improve food safety;
6. Maximize impact of household income on nutrition through concerted design efforts,

- such as through increasing women's access to income-generating opportunities and discretionary control of income;
7. Increase market access and opportunities to improve smallholder incomes (especially for women) and consumer diets. Enhancing the fairness, transparency, efficiency, and functioning of markets, in particular taking into account the interests of smallholders, improving related infrastructure;
 8. Reduce seasonality of food-insecurity through diversification throughout the year, improved storage and preservation, and other approaches;
 9. Promote safety, quality, and the nutritional value of food and agricultural products;
 10. Enhancing food utilization through access to clean water, sanitation, energy, technology, childcare, healthcare, and access to education, including on how to prepare, provide, and maintain safe and nutritious food;
 11. Enhancing awareness, knowledge, and communication, on food quality, safety, nutrition, and public health issues, leading to strengthened capacity along the entire agriculture and food system, particularly for smallholders;
 12. Do no harm. Potential harms could arise from increasing women's workloads, crop choice, agrochemicals, increased agricultural water use and zoonotic disease.

In 2017, FAO developed guidelines/principles to integrate nutrition into food security and livelihoods interventions for emergencies in Pakistan. According to the guidelines, the first step is to incorporate explicit nutrition objectives and indicators to track progress; targeting and selecting the most affected and vulnerable beneficiaries; integrating nutrition from emergency to the recovery phase; and promoting multi-sectoral planning and linkages with nutrition specific interventions.

After delineating explicit nutrition objectives and indicators, there is a need to target and select the most affected and vulnerable beneficiaries. Proper targeting and selection of beneficiaries helps to prioritise groups that are most affected by under nutrition. It also has potential to increase cost-effectiveness of a project. Beneficiaries can be direct beneficiaries of the project activities or indirect beneficiaries or those who may not directly participate in an activity, but still benefit from project activities. The most vulnerable groups may include the socially vulnerable groups like smallholder and marginal farmers, landless labourers, women, indigenous people, food insecure households, households living in at risk areas, and the physiologically vulnerable, such as the "1000 days" (adolescent girls, women of reproductive age, pregnant women, and small children), people such as PLHIV, elderly, and disabled people.

It is important to be aware of conflicts and inconsistencies associated with targeting in multi-sectoral programs covering sectors like health, WASH, and agriculture which target different groups. For example, agriculture programs may focus primarily on economically active groups and leave the most vulnerable behind. Also, projects should take into consideration special needs of nutritionally vulnerable people, such as maternal and infant young child nutrition, in particular for children aged 6-23 months and PLWs.

Thirdly, there is need to integrate nutrition from emergency to the recovery phase to build people's resilience towards future malnutrition, or other shocks during emergencies. Further, integrating nutrition into food security and livelihoods in emergencies can enhance resilience in areas prone to conflict and disasters. The phase of the emergency defined by the amount of time passed since its occurrence, type of crisis, its onset, duration (especially in protracted crisis) and its impact are among the most important factors that determine the feasibility and degree of nutrition integration into FSL programmes.

The fourth level is to promote multi-sectoral planning and linkages with nutrition specific interventions. Different organisations are challenged to include nutrition-specific objectives in their programs so as to jointly deliver a comprehensive set of interventions all targeting nutrition. According to the FAO (2017:36),

Using a multi-sectoral approach for nutrition sensitive programming can allow organizations to apply their specific expertise to jointly deliver a comprehensive set of interventions in collaboration with partners, share resources and use existing infrastructure and interventions where available, which can result in time and cost savings. It can allow nutrition sensitive FSL interventions to be linked or integrated with nutrition specific interventions being implemented in the same geographical area.

A problem-solution tree approach can be used to carry out multi-sectoral analysis.

The guidelines developed by FAO recognized the challenges likely to be encountered while integrating nutrition into food security and livelihood interventions including targeting limitations because of time constraints, difficulty in establishing linkages between human nutrition and livestock support activities, cultural and security issues, and budgeting and resource mobilization.

The above-mentioned efforts build on a conceptual framework of nutrition developed in the early 1990s by UNICEF. The framework has served as the industry standard for understanding the causes of undernutrition for more than 25 years (IFPRI, 2016). It demonstrates how drivers of malnutrition function at various levels-immediate individual-level (causes of malnutrition), household and community-level determinants, and basic or structural-level triggers (policies, power, politics, and their capacity). In 2020, Black et al. suggested some improvements to the framework resulting in a framework that recognizes the importance of not only surviving, but also thriving. According to the authors,

Thriving "includes the ability of children to form relationships, learn, take on responsibilities, and ultimately to establish a family, provide economic stability, and contribute to society. To build the broader skills of thriving, children require opportunities for responsive relationships and opportunities to explore and learn, within a secure and safe context." (p.e766).

Despite these efforts, there is need to develop a framework that relates livelihood programming, nutrition and early learning to complete the cycle.

3.3.3 Best Practices in Program Design/ Approach

Extant literature shows that there are several best practices in program design/approach that program designers need to pay attention to like type of intervention; the need to consider program characteristics such as program modalities (cash, food, a combination of these; multipurpose cash etc.), regularity of program benefits, and adequacy of benefit level, and targeting (gender and person characteristics e.g. age); adoption of a multi-sectoral approach; incorporation of nutrition education and behavior change; community engagement; and articulating an evidence-based theory of change. Other design issues include context (adapting program to context), programming holistically, formation of partnerships, and inclusion of training and coping. Overall, evidence indicates that a combination of the above design aspects is likely to result in better nutritional outcomes. Details of the above program issues and their supporting evidence are discussed below.

3.3.3.1 Intervention Types

There are several types of livelihood and food security interventions that could be integrated including nutrition sensitive agriculture, enhancement, diversification, substitution, and climate-smart interventions. In addition to these, there are interventions which aim at enhancing social protection and reducing poverty (e.g. graduation programs). The evidence presented below summarizes key integration issues and outcomes pertaining to the above interventions.

Nutrition-Sensitive Agriculture/ Interventions. Rural malnutrition can be decreased by nutrition-sensitive agricultural programs (Thai et al., 2023). The development of nutrition-specific interventions can be

accelerated with the aid of nutrition-sensitive programs, which can help create an environment that stimulates young children to reach their full potential (Ruel & Alderman, 2013) large-scale nutrition-sensitive programmes that address key underlying determinants of nutrition and enhance the coverage and effectiveness of nutrition-specific interventions. We reviewed evidence of nutritional effects of programmes in four sectors - agriculture, social safety nets, early child development, and schooling. The need for investments to boost agricultural production, keep prices low, and increase incomes is undisputable; targeted agricultural programmes can complement these investments by supporting livelihoods, enhancing access to diverse diets in poor populations, and fostering women's empowerment. However, evidence of the nutritional effect of agricultural programmes is inconclusive - except for vitamin A from biofortification of orange sweet potatoes - largely because of poor quality evaluations. Social safety nets currently provide cash or food transfers to a billion poor people and victims of shocks (eg, natural disasters). When developing nutrition sensitive agriculture programs, context, cultural, economic, and food environment factors (including markets) must be taken into consideration (Ruel et al., 2018). Programs in agriculture that are nutrition-sensitive enhance a number of nutrition-related outcomes in both mothers and children. Programs that include health, water, sanitation, and hygiene interventions as well as micronutrient-fortified products have greater effects on children's nutritional status (Ruel et al., 2018). Including nutrition, health, behavior change communication, and women's empowerment in nutrition sensitive agriculture increases effectiveness of these interventions (Ruel et al., 2018).



Photo: The AfriChild Centre

A study by Moucheraud et al. (2019) found that land cultivation in peri-urban Nepal was linked to less stunting than livestock ownership. Particularly significant were findings linking household vegetable production, increased vegetable consumption, and lower odds of child stunting. The study found that women in farming households were significantly more likely to consume green leafy vegetables than women in non-farming households. Further, children in vegetable-growing households had lower odds of stunting than children in non-vegetable-growing households that cultivated land (Moucheraud et al., 2019). In Uganda, efforts to achieve refugee independence from aid structures have been pursued agricultural methods and provision of plots of land to enable them cultivate food for consumption (Rohwerder, 2016).

A systematic review of best practices and opportunities for integrating nutrition specific into nutrition sensitive interventions in fragile contexts revealed that agriculture, livelihoods, social safety nets, women's empowerment, education, and early child development contribute indirectly to better nutrition outcomes (Abdullahi et al., 2021). Children's nutrition status and population health are impacted by connections between agriculture and education through school meal programs (Duncan et al., 2022) multi-sectoral strategies to improve nutrition are necessary. Building towards this goal, the food and agriculture sector must be considered when designing nutritional interventions. Nevertheless, most frameworks designed to guide nutritional interventions do not adequately capture opportunities for integrating nutrition interventions within the

food and agriculture sector. This paper aims to highlight how deeply connected the food and agriculture sector is to underlying causes of malnutrition and identify opportunities to better integrate the food and agriculture sector and nutrition in low and middle income countries. In particular, this paper: (1. Acute malnutrition treatment, complementary feeding, and prevention and treatment of infectious diseases are nutrition-specific actions that address the immediate factors affecting a child's nutrition and development (FAO, 2021).

According to a study done in rural Bangladesh, integrating an ERD program into nutrition programming could increase dietary diversity for mothers and children, food security, and household income through a nutrition-sensitive pathway (Kang et al., 2023). The study indicated however, that the program had no effect on child underweight (Kang et al., 2023). Glaser et al. (2021) showed that households participating in the Nutrition and Income Generation Intervention (NIGI) project in Northern Uganda produced more fruit and vegetables, both in

terms of quantity (in kilograms) and variety, and as a result, earned more money. NIGI also had a positive impact on household dietary diversity. Despite this, it was unable to prevent use of risky coping mechanisms that endanger food security (Glaser et al., 2021).

According to Bouguen & Dillon, (2020), a nutrition-focused livelihoods program in Burkina Faso consisting of a cash transfer, productive asset, and nutrition intervention successfully reduced chronic malnutrition by about one-third and increased participants' productive assets after two years. The researchers posited that to significantly improve nutrition, specific nutrition programs (distribution of flour, cereals, mother training) should be implemented (Bouguen & Dillon, 2020). In contrast, according to a study conducted in Bangladesh, the livelihoods intervention of the Urban Partnership for Poverty Reduction did not significantly improve the nutritional status of children and may not have given households enough resources to use the nutrition component (Nisbett et al., 2016).

Tirivayi et al. (2021) found that unconditional cash transfers increased household consumption, improved food expenditure, increased the number of meals per day, improved consumption of nutrient-rich foods, and dietary and food security. There was also a reduction in child illness in some countries due to an increase in health seeking behavior during illness. However, there were inconsistencies due to variations in drivers and social norms, operational constraints, and limitations in pre-programme access to social services across sub-Saharan Africa. The authors concluded that for increased effectiveness, cash transfers should be 20% or more of the household baseline consumption equivalence, be adjusted regularly in terms of size, be more regular, and targeted to households with labor than those that are labor constrained. Further, CTs should be integrated into other services and beneficiaries should spend longer time periods on the program. To reduce malnutrition, they recommended 'plus' programming which, allows system linkages to address the underlying determinants of malnutrition (e.g. combining an unconditional cash transfer with agricultural intervention) (Tirivayi et al., 2021) such as home gardening, nutritional counselling (Ashraful et al., 2020).

Enhancement Interventions. A review of the livelihood and environmental aspects of agricultural interventions for improved nutrition found that enhancement interventions try to make minor adjustments to ongoing household food production methods and consumption patterns through shifts in the availability of food and nutrients (Fiorella et al., 2016). Biofortification of crops already grown by households, like orange-fleshed sweet potatoes, is a hallmark of these interventions. When targeted households are already participating in the supported agricultural activities, provision of agricultural training, extension services, or inputs, such as improved seeds or fertilizer, may also be an enhancement intervention (Fiorella et al., 2016). According to Fiorella et al. (2016) the nutritional effects of enhancement interventions are few or follow relatively narrow pathways because of the programs' inability to increase opportunities for women's empowerment and income control given their emphasis on enhancing current livelihood strategies. Acceptability of adjustments to production and consumption activities of such programs determines the extent to which they affect improved nutrition, as well as the extent to which they are adopted in agricultural policies and value chains is critical to their long-term viability (Fiorella et al., 2016).

Diversification Interventions. Diversification interventions seek to provide households with a new food production strategy to supplement ongoing household livelihood activities while also diversifying food sources and consumption (Fiorella et al., 2016). This type of intervention typically includes home gardening initiatives, dairy goat production, poultry keeping, or a combination of these. These strategies aim to improve access to nutritious foods with high micronutrient content (Fiorella et al., 2016). Typically, they involve both nutrition counseling and training in food production to advance

agricultural goals. Through pathways from women's empowerment to improved nutrition outcomes for women, infants, and young children, these interventions frequently target women to increase their access to nutritious foods and control over production.

Increasing crop diversification in backyard gardens, along with other initiatives like promoting naturally occurring vegetables, and educational and promotional initiatives, is essential for ensuring the successful adoption of particular crops for better nutritional outcomes and livelihoods (Estrada-Carmona et al., 2020) farms and landscapes through nutrition-sensitive agriculture (NSA). In addition to the nutritional results, diversifying home gardens allows for the maximization of income generation which has additional advantages for the early development of children (Estrada-Carmona et al., 2020) farms and landscapes through nutrition-sensitive agriculture (NSA).

In order to change nutritional status, diversification interventions use a variety of different and frequently divergent pathways. There is a significant opportunity to alter diets and nutrition given how much diversification activities alter the context of food production and consumption. These interventions, which frequently take a multifaceted approach, consider various aspects of households and livelihoods. However, because they are influenced by a variety of factors, from the cost of food, which affects the sale or consumption of food products, to the amount of rainfall, which influences the effort needed to irrigate a garden, the larger context in which they operate may significantly shape their impact (Fiorella et al., 2016).

In contrasting small-scale farm systems in Kenya and Vietnam, a study by Timler et al. (2020) investigated the windows of opportunity

for farm development, and the potential of crop diversification options to meet household dietary requirements while simultaneously improving household economic performance. It found that diversifying with new vegetables could meet the vitamin A needs of 10 to 31 additional people per hectare while also increasing household income by 25 to 185% but decreasing leisure time. Although the Vietnamese sites had higher nutrient system yields than the Kenyan sites, the Kenyan household diets had higher nutrient adequacy because the Vietnamese farmers sold more of their on-farm produced foods. It was concluded that **nutrition-sensitive, multi-method approaches** have the potential to simultaneously identify solutions for improving household income, nutrition, and management of resources in vulnerable smallholder farming systems (Timler et al., 2020) and contribute simultaneously to improving household nutrition, farm productivity and environmental performance. We explored the windows of opportunities for farm development and the potential of crop diversification options for meeting household dietary requirements, whilst concurrently improving household economic performance in contrasting smallholder farm systems in Kenya and Vietnam. Farm and household features and farmer perspectives and priorities were integrated into a farm-household model that allowed quantification of a diverse set of nutritional, labour and productive indicators. Using a multi-objective optimization algorithm, we generated 'solution spaces' comprising crop compositions and management configurations that would satisfy household dietary needs and allowed income gains. Results indicated site-specific synergies between income and nutritional system yield for vitamin A. Diversification with novel vegetables could cover vitamin A requirements of 10 to 31 extra people per hectare and lead to greater income (25 to 185% increase).

Substitution Interventions. Substitution interventions aim to produce more food, increase income, and significantly alter household activities (Fiorella et al., 2016). These interventions frequently concentrate on the production of cash crops with nutrition benefits coming from increased incomes. In response to changing natural resources that hinder production, such as declining soil quality, fish stocks, or forest access, these interventions may also encourage changes in livelihood. Despite being primarily focused on agriculture, substitution interventions frequently emphasize the sale of agricultural goods rather than domestic consumption. If households have access to these products, increasing the availability of animal-based foods and micronutrient-rich foods may help achieve nutrition goals in a nation or region. Additionally, households may be able to purchase better diets with the money they earn from more lucrative jobs. Even though many substitution livelihood interventions are not necessarily nutrition-sensitive, it is important to link them with household nutrition (Fiorella et al., 2016).

Due to the specialized nature of these strategies, however, households can occasionally be forced into more constrained means of subsistence and reliance on specific markets or natural resources. Further, the interventions have a tendency to alter patterns of food consumption, time use, and care for women and children as a result of the displacement of additional methods and activities (Fiorella et al., 2016). For example, the construction of a new road or the cost of exports to other countries may have a significant impact on income and nutrition outcomes as farmers concentrate their livelihood activities (Fiorella et al., 2016).

Climate Smart Interventions. In some refugee settings in middle and North Africa, frontier agriculture has been practiced to improve nutrition and livelihoods. Frontier agriculture, which includes climate-smart and water-saving agricultural techniques like hydroponics, can improve well-being and nutritional status for farmers and people who have been forcibly displaced and those that are usually less integrated into the labor market (World Bank & UNHCR, 2017). But, to be successful, interventions to promote frontier agriculture among refugees need to set realistic standards that align the technical requirements for using hydroponics (or other ponics) with the socioeconomic circumstances of the target population and host communities (World Bank & UNHCR, 2017). Available evidence indicates that a matching procedure should take into account, among other things, a refugee's background in agriculture, potential suitability and skills to engage in frontier agriculture (for instance, education, reservation wage, and entrepreneurial spirit), needs (food insecurity, work close to home, and other needs), and availability of water, which is a fundamental input for hydroponics. Along with the refugees' background, it is also necessary to evaluate the accessibility of basic inputs and the overall economic situation in the host community (World Bank & UNHCR, 2017).

According to Digirolamo et al. (2014), aquaculture can contribute to improved food and nutrition security through various channels: local food supplies can be improved through the increased availability of low-cost fish, employment opportunities and incomes can be raised, and consumption of fish can be increased directly. Fish plays a crucial role in improving diets especially children's diets and child nutrition. When programmes that improve access to fish are combined with effective nutrition education

to promote the inclusion of fish in children's diets, child nutrition can be markedly improved in a very cost-effective manner. Despite the potential of increased quantity and variety of fish and other foods consumed by the poor to reduce undernutrition, dietary improvements are not automatic benefits of aquaculture development (Digirolamo et al., 2014).

Graduation Programmes. According to Roelen et al. (2019) graduation programming has potential to improve early childhood development, particularly in areas of health, nutrition and security. A graduation programme implemented in Haiti which provided cash stipends, asset transfers, access to saving and credit, training, and tailored coaching improved food intake, sanitation practices, and housing conditions. The programme also had a modest role on responsive caregiving and early learning, especially before children started moving around and talking. Further, it increased mothers' abilities to meet basic needs of children because of increasing cash at household level. Training, continuous messaging, and tailored advice created awareness about nutrition, sanitation, and caregiving practices. These results were realized through different pathways including income effect, training effect, synergy effect, and work and care tradeoff. The research highlighted several factors pertinent to linkages between ECD and the program, such as increased women's capabilities and agency to participate in economic activities and financial independence, high levels of distrust because of spiritual beliefs, limited opportunities for children to be left in the care of others, strong relations with family and community, and the need for caregivers' economic security to be accompanied with availability of quality basic services. The report recommended greater focus on messaging in relation to early learning and responsive caregiving, greater

involvement of male caregivers in training and coaching, acknowledgement of the gendered nature of work and care, challenging programme narratives about gendered roles and responsibilities in providing childcare, discussing and trying community child care options, creating greater linkages to services where available, and keeping pressure on government to provide basic services and infrastructure (Roelen et al., 2019).

Nutrition-Sensitive Social Protection.

Reporting findings of a two-year randomized controlled trial in Bangladesh that involved cash transfers, food transfers, cash and food transfers, cash and nutrient behaviour change communication, and food and nutrient behavior change communication, Hoddinott et al. (2018) observed that the program increased use of multiple micronutrient powders and iron supplements among rural primary school children. The intervention increased mothers' knowledge of Fe-deficiency, awareness of multiple-micronutrient powders, and increased the likelihood that children 6-59 months consumed multiple-micronutrient powders and Fe supplements.

According to Fiszbein et al. (2009), households that receive Conditional Cash Transfers (CCTs) spend more on food and higher-quality sources of nutrients than other households of comparable income. These households also make more use of health services. Cash transfers, accompanied by information, social support, weight monitoring, and micronutrient supplementation can stimulate healthier feeding practices and improve young children's nutritional status dramatically, particularly the incidence of stunting. Basset (2008) observed that where utilization of nutrition interventions is low, there is significant potential for CCTs to play a greater role in reducing undernutrition by encouraging groups at high risk of undernutrition

to utilize effective nutrition services and by encouraging improved quality of these services.

Bailey and Hedlund (2012) found that cash transfers increased expenditure on food and meal frequency, dietary diversity and led to a decline in negative coping strategies and malnutrition in general. For instance, in Malawi, self-reported hunger among children decreased for cash and food recipients (79% to 61%), while in South Sudan, there was reduction in coping strategies that can have negative impact on nutrition and decline in self-reported hunger. Cash transfers also have the potential to reduce women's workloads creating more time for them to take care of children which ultimately leads to increased child-care. For example, in Myanmar, caring practices of mothers for malnourished children improved due to cash transfers; 90% mothers were feeding children according to international standards, while 85% reported eating balanced diet meals. There was increase in early initiation of breastfeeding, exclusive breast feeding, feeding frequency and dietary diversity for young children. Exclusive breast feeding improved from 72% after the 1st payment to 95% after second payment during the project.

According to Devereux and Nzabamwita (2018), the Senior Citizens Grant in Uganda improved food security through enhanced ability to buy food and facilitating investment in productive assets in the longer-term. The Cash Transfer reduced hunger, improved diets, and reduced wasting among children because recipient households could afford to cover their basic needs as well as purchase animals and chickens. These purchases increased their consumption of own milk and eggs in addition to purchased proteins (including meat and fish) rather than relying too much on starch. The authors further noted that in Zambia, the District Social Cash Transfer Project, which targeted the

'ultra-poor', a universal old age pension and the Child Grant Programme increased consumption per capita. The income was spent on food, the largest share going to cereals, followed by meat (including poultry and fish), as well as cooking oil and sugar. Dietary diversity among grant recipients increased and beneficiaries reported eating more meals per day than before. The Child Grant also induced behavioural changes that could positively affect nutritional outcomes.

According to Spray (2015), factors that make social protection programming improve nutrition include political commitment, coordination of policies and programs, accountability to nutrition commitments, appropriate program design and delivery, multi-sectoral collaboration through a systems approach, mass media and social media, community engagement and participation, and having a substantial resource.

Spray (2015) further highlights factors that enabled success of nutrition-sensitive social protection in different places such as prioritizing nutritionally vulnerable populations, disbursing transfers to women to increase expenditure on nutrition, provision of adequate and regular payment of benefits. He also highlights promotion of the use of nutrition, health and other human capital building services, creation of effective linkages between programs targeting the same beneficiaries, linking programs with nutrition-sensitive agricultural food systems, incorporating nutrition education and behavior change communication, measuring nutrition results, and monitoring nutrition impact to inform program design and improve quality

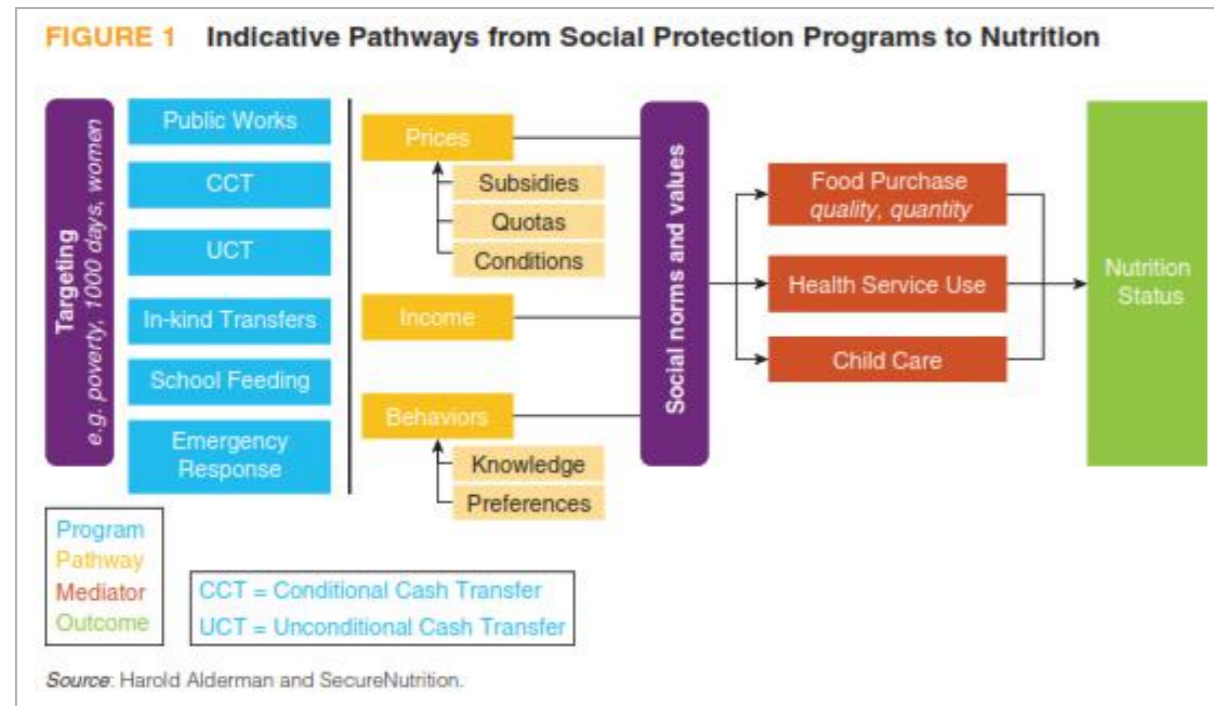
Despite these benefits, outcomes of CCTs like vaccination, nutritional status, morbidity, and mortality, are mixed. Hoddinott and Bassett



Photo: The AfriChild Centre

(2008) found that social protection programmes in Mexico and Nicaragua had marked improvements in child height, while in Brazil and Honduras there were essentially no effects on preschool nutritional status. Improvements in iron status were observed in Mexico, but not in other countries where this outcome was studied. A study by Leroy et al. (2009) found that although CCTs can improve child anthropometry, they have very little impact on micronutrient status. Further, the study found a large gap in knowledge about the mechanisms by which CCT programs improve nutrition. The authors concluded that there is a need to better understand impact pathways and the role of contextual factors in reducing or enhancing programme effectiveness.

Alderman (2016) used a standard economic model of the production of health to illustrate how social protection can address the underlying determinants of malnutrition. The model shows indicative pathways whereby nutritionally vulnerable populations can be targeted through social protection programs. The programs' effects on factors such as income, prices, and household behaviors change the degree to which families choose to invest in health and how they do it. But, it is important to note that broader social norms, social values, technology, and services that promote health and skills of households will influence this decision making.



Alderman, however, cautions that despite increasing incomes, cash transfers do not always translate into nutrition outcomes. Ideally, a household that receives one dollar in transfers should increase consumption plus savings by virtually the same amount. There is a possibility, however, that the availability of a transfer will reduce non-transfer income due to either changes in remittances or changes in labor allocation. Factors that influence private transfers include migration of family members as well as the timing of transitory shocks. There is also a possibility that an individual receiving a transfer may pass some of the assistance to other family members or to neighbors. These are some factors that might challenge social protection income from affecting nutrition.

Despite being associated with many, though varying positive outcomes on children's nutrition and early learning, it is difficult to single out the most preferable intervention or one that program designers should focus on. The reviewed interventions have been implemented in different contexts, with different goals and objectives, under different circumstances. Moreover, without a study comparing outcomes of the interventions, it is difficult to advocate for a particular intervention. Anyone planning to design an intervention should consider the outcomes of individual interventions as well as weaknesses highlighted above.

3.3.3.2 Adoption of a Multi-Sectoral Approach

Research relating agricultural and food sectors with nutrition interventions for better health outcomes has emphasized the importance of multi-sectoral approaches to combating malnutrition as well as the influence of farmer behavior and practices on nutritional outcomes (Duncan et al., 2022) multi-sectoral strategies to improve nutrition are necessary. Building towards this goal, the food and agriculture sector must be considered when designing nutritional interventions. Nevertheless, most frameworks designed to guide nutritional interventions

must be considered when designing nutritional interventions. Nevertheless, most frameworks designed to guide nutritional interventions do not adequately capture opportunities for integrating nutrition interventions within the food and agriculture sector. This paper aims to highlight how deeply connected the food and agriculture sector is to underlying causes of malnutrition and identify opportunities to better integrate the food and agriculture sector and nutrition in low and middle income countries. In particular, this paper: (1. It has been suggested that in order to effectively address malnutrition, program design should take into account the connections between the food and agriculture sector and other crucial sectors (Duncan et al., 2022) multi-sectoral strategies to improve nutrition are necessary. Building towards this goal, the food and agriculture sector must be considered when designing nutritional interventions. Nevertheless, most frameworks designed to guide nutritional interventions do not adequately capture opportunities for integrating nutrition interventions within the food and agriculture sector. This paper aims to highlight how deeply connected the food and agriculture sector is to underlying causes of malnutrition and identify opportunities to better integrate the food and agriculture sector and nutrition in low and middle income countries. In particular, this paper: (1. According to Duncan et al. (2022), malnutrition is a serious problem that requires a multi-sectoral solution. To address malnutrition comprehensively, program design should take into account how the food and agriculture sector is linked to other critical sectors such as social protection (Duncan et al., 2022) multi-sectoral strategies to improve nutrition are necessary. Building towards this goal, the food and agriculture sector must be considered when designing nutritional interventions. Nevertheless, most frameworks designed to guide nutritional interventions

do not adequately capture opportunities for integrating nutrition interventions within the food and agriculture sector. This paper aims to highlight how deeply connected the food and agriculture sector is to underlying causes of malnutrition and identify opportunities to better integrate the food and agriculture sector and nutrition in low and middle income countries. In particular, this paper: (1.

At the national, sub-national, and local levels, locating the governance of programs within multi-sectoral coordination structures for nutrition and social protection enables the participation of various sectors, connections between various systems at each level, and decentralized decision-making (UNICEF, 2023). It has also been argued that if the community infrastructure necessary to ensure nutrition such as schools, health clinics, clean water, irrigation systems, and transportation services is not in place first, households will not be able to sustainably improve their nutrition and livelihoods (Busse et al., 2017). Multisector nutrition interventions can be directed toward enhancing community and institutional assets for all members by identifying and comprehending gaps in fundamental community infrastructure, as well as who accesses them and who does not within communities (Busse et al., 2017).

Building meaningful cross-sectoral collaborations takes time. The ability to continue engaging with the same stakeholders is made possible by successive funding support, which extends the project lifetimes (Colecraft et al., 2022). Poverty is a common challenge among populations targeted by rural institutions, so addressing it as a core goal of an intervention approach galvanizes strong multi-sectoral buy-in across projects (Colecraft et al., 2022).

Results of a study on how well an integrated agriculture, nutrition-specific, and nutrition-

sensitive program affected child growth in Western Kenya underlined the necessity of a multi-sectoral strategy that includes WASH but also education and strong behavior change approaches to combat malnutrition (Wegmüller et al., 2022). According to the study, **providing a range of interventions**, including agriculture, nutrition, and WASH products, as well as behavior change training, led to a modest rise in child growth when compared to the agriculture intervention alone (Wegmüller et al., 2022).

A study carried out in Eastern Chad from 2013-2015 to assess the long-term impact of a multi-sectoral nutrition intervention that provided water, sanitation, hygiene, livelihood, health, and nutrition support highlighted the risks of not including data collection points beyond program implementation and organizational presence in initial program evaluation design (Marshak et al., 2021). According to the study, while programs may appear to be effective in reducing malnutrition in the short run, the reality is that malnutrition levels return to pre-programme levels after program termination (Marshak et al., 2021).

The development and assessment of contextually appropriate, multisector nutrition interventions should be influenced by an understanding of both the assets and local contexts (Busse et al., 2017). Designing and evaluating multisector nutrition interventions in accordance with local institutions should take into account these contexts, systems, and relationships to ensure effectiveness. Further, community leadership and knowledge should be used to drive solutions to nutrition challenges (Busse et al., 2017).

To address malnutrition, it is recommended to adopt a multi-sectoral approach. This is because such an approach leverages linkages and strengths or impacts of outcomes in sectors

like WASH, social protection on nutrition. Furthermore, it is important to understand the local context and systems, mobilize local capacities, adopt a participatory approach, and build meaningful cross-sectoral collaborations.

3.3.3.3 Incorporation of Nutrition Education and Behavior Change into Program Design

Behavior change communication has been highlighted as a good practice for improving child nutrition, livelihoods, and overall growth and development. A study carried out in Yemen found that increased consumption of non-staple foods at the household level translated into enhanced dietary quality for children at the critical stage of complementary feeding and improved height for age in a subgroup of the most treated and deprived children when local volunteers led monthly behavior change communication sessions (Kurdi, 2021). According to a study done in Bangladesh, maintaining effective behavior change communication interventions for infant and child feeding until these practices are accepted as the norm is essential for the success of early childhood growth and development programs (Kim et al., 2018) Alive & Thrive (A&T).

Developing appropriate interventions and policies to improve maternal and child nutrition necessitates cultural and contextual awareness. Even if the biological processes underlying optimal nutrition are well understood, a woman's level of empowerment may influence her ability to command the resources required to implement recommended infant and young child feeding practices and take care of her own nutrition (Malapit & Quisumbing, 2015).

Women's group-based programs that specifically trigger behavior change pathways have the highest success rate in improving

nutrition outcomes, with the most compelling evidence for infant and young child feeding practices (Kumar et al., 2018). According to a study that examined the effects of an integrated nutrition intervention on the growth and development of young children under two in rural Bangladesh, the recommended interventions include encouraging breastfeeding, using behavior modification and communication techniques to enhance complementary feeding practices, supplementing and fortifying foods to increase micronutrient status, and using health interventions to reduce the incidence of infectious diseases in young children and infants (Ara et al., 2019) poor child-feeding practices and infection negatively impact the growth of under-twos. Approximately one-third of under-fives in developing countries are stunted; many are also micronutrient deficient. An estimated 6% of mortalities among under-fives can be prevented by ensuring optimal complementary feeding. The objective of the study was to assess the ability of a 12-month integrated nutrition intervention to improve the nutritional status (length-for-age Z-score. According to Nordhagen & Klemm (2018), projects promoting poultry for nutrition should prioritize effective behavior change communication to promote egg consumption.

A systematic review of 91 studies from low and middle-income countries (LMICs) found that Social Behavior Change Communication (SBCC) improved dietary practices among pregnant and lactating women, enhanced breast-feeding practices, and positively influenced a wide range of complimentary feeding practices (Lamstein et al., 2014). Additionally, SBCC may enable beneficiary knowledge of nutrition to be sustained for years after concluding an intervention (Hoddinott et al., 2014).

and Roy (2018) found that a transfer (food or cash) accompanied by high-quality nutrition BCC improved mothers' average knowledge of Fe deficiency and awareness of multiple multi-nutrient powders (MMP). It also significantly increased the likelihood of their children aged 6–59 months consuming MMP or some other Fe supplement (tablets, syrup) in the preceding week. Receiving a cash transfer alone also significantly increased mothers' awareness of MMP as well as children's likelihood of consuming MMP in Northern Bangladesh. It is possible that the receipt of cash resulted in mothers frequenting markets or health centres where these supplements were sold, and this exposure resulted in improved awareness and use of MMP. However, no similar effect was observed in the South and, as noted above, in the North the impact of receiving cash was smaller than that of receiving both cash and nutrition BCC. Combining transfers with intensive high-quality BCC increased mothers' knowledge of Fe deficiency and awareness of supplements that led to significant increases in the likelihood that their children aged 6–59 months consumed MMP. These results suggest that relaxing only the income constraint of poor households will not be sufficient to increase uptake of MMP and related supplements. However, relaxing both the income and awareness constraints together may be effective in a setting where the supplements are widely available.

SBCC is stronger when it is context-specific. This entails that SBCC teams use a combination of communications activities and channels designed to resonate with audience segments (e.g. adolescents, primary caregivers, spouses) and appeal to their core cultural values (Kreuter et al., 2003). SBCC campaigns must be designed to provide a sense of urgency on nutritional problems and cultivate a certain level of confidence on the part of caregivers

in the practice of a basic set of pro-nutrition actions. They must also serve as the thread that bridges between institutional providers, users of health and nutrition promotion services, and rally community members to adopt and champion optimal feeding especially among pregnant and lactating women (including adolescent women and caretakers of children under 2 years). To be effective, SBCC campaigns should appeal to spouses, close relatives, and members of networks of targeted individuals to offer the necessary conducive environment for adoption of positive nutritional and health seeking behaviors (Kreuter et al., 2003).

Furthermore, SBCC tools should be developed in such a way that provides programme staff with practical steps on how to initiate and sustain family and community dialogue on issues of proper nutrition and how to encourage programme target population segments to make more nutritious food choices at home and the market. Additionally, these tools should encourage improved infant and young child feeding (IYCF) practices (including adding micronutrient powders to complementary foods during home fortification). SBCC approaches should also be able to rally leaders at all levels to join in a collaborative effort to strengthen nutrition wellbeing and, if there is need, include approaches intended to change behaviours of front-line workers who help deliver program services (Kreuter, et al., 2003).

The evidence above indicates that it is important to incorporate nutrition education and behavior change into program design to ensure better outcomes. For instance, incorporating BCC in nutrition programs empowers women to command resources required to ensure nutrition practices. Behavior change interventions, however, need to be sustained until they are accepted as the norm; they should also be group based and contextually sensitive.

3.3.3.4 Community Engagement

One of the best methods for improving early childhood education and nutrition for children is to implement culturally appropriate practices that support community and family engagement (Muehlhoff et al., 2017; Stevens et al., 2023). Working with communities to improve food preferences and nutrition awareness helps to mitigate the imbalance between nutrition and income especially for people in displacement (Estrada-Carmona et al., 2020) farms and landscapes through nutrition-sensitive agriculture (NSA).

Key strategies to ensure the successful implementation of nutrition-sensitive activities include strengthening formal or informal local governance structures, developing the collective capacity of people the community trusts, and members of the community, and promoting the collective benefits of community assets (Busse et al., 2017).

3.3.3.5 Articulation of an Evidence-based Theory of Change

Specific nutrition goals and an evidence-based theory of change for improved nutrition that depicts expected change along the food, services, and practices pathways are two factors that increase the likelihood that cash transfer programs will have a positive impact on nutrition (United Nations Children's Fund, 2023). Further, multiple asset categories are more accurately assessed as contributing to improved livelihoods by interventions that improve and track changes from these asset categories (Busse et al., 2017).

3.3.3.6 Paying Attention to Program Characteristics

Although programs have many characteristics, existing evidence indicates that there are certain attributes that those designing programs need to pay attention to, for instance, program modality; regularity of intervention (e.g. cash transfers); adequacy of benefit level; targeting; contextual adaptation; and holistic programming. These attributes and the evidence supporting their prioritization in program design are discussed below:

Program Modalities. Program modalities are associated with success of livelihood programs/interventions. Program modalities include in-kind, cash, or vouchers (Guliz et al., 2019). Within intervention types, programs can adopt a single or mixed modality approach, conditional or unconditional, restricted and unrestricted or multi-purpose modalities (Elluard, 2015). A study that evaluated the effects and cost benefit analysis of a cash modality scale up programme for refugees and host communities in Kenya noted that a mixed modality intervention registered higher food security, nutrition, and consumption in households (UNU-MERIT, 2018). In Kalobeyei refugee settlement, a change in the modality of a cash transfer program from restricted to unrestricted cash paid directly through bank accounts led to reduced likelihood of program households reselling food handouts (Sterck et al., 2020).

Further, Altindag and O'Connell (2022) found that unconditional cash transfers improve consumption, child well-being, food security, and reduce livelihood coping. Households spend transfers on basic needs and take children out of work and re-enroll them in school. Beneficiaries also increase cash savings and their stock of durable goods. The authors, however, noted that these impacts are short lived as beneficiaries liquidate and spend the accumulated assets during or soon after the beneficiary period.

According to Ahmed et al. (2019), cash, food and cash and food transfers by themselves have no impact on children's nutritional status. However, combining cash transfers with intensive nutrition behavior change communication activities has large impacts on chronic undernutrition, increasing HAZ by 0.25SD. Further, the researchers found that children in households receiving combined BCC and cash were less likely to have fever or cough in the two weeks prior to the study. Compared to the modality combining food and BCC, the cash and BCC modality had larger effects on intake of animal source foods, resulting in larger increases in protein intake, increasing the likelihood that children consume dairy products, and resulting in larger impacts on choline intake. Cash and BCC also had a larger impact on energy intake than food and BCC. The underlying mechanisms for these impacts include increase in maternal knowledge of good care practices.

According to Moussa et al. (2022), multipurpose cash helps households meet a variety of needs, such as securing food and a means of subsistence as well as making investments in the health and education of their children. Benefits from combining multipurpose cash with early learning, nutrition, and livelihood initiatives are substantial. The positive health

effects of multipurpose cash on preschoolers tend to decline in the absence of ongoing or sustained cash assistance. The effects on health, education, child labor, and early marriage, however, tend to endure even after multipurpose cash is stopped.

Results of a study evaluating the effects of multipurpose cash assistance on Syrian refugee children living in Lebanon showed that children whose parents received multipurpose cash were switching from informal to formal schooling and avoiding child labor (Moussa et al., 2022). The study demonstrated that the obstacles to educational access are not just related to learning disabilities but also have an economic component (Moussa et al., 2022).

Regularity of Intervention (e.g. Provision of Cash Transfers). Regularity of cash transfers increases predictability and a household's ability to manage risks. Households can better manage risks by preventing the use of negative risk coping strategies if transfers are more predictable (UNU-MERIT, 2018). Unpredictable disbursements of CBT are associated with negative coping strategies like buying of food on credit (as in Kalobeyei refugee settlement). For instance, there was higher prevalence of food rationing in Kakuma than Kalobeyei due to unpredictable disbursement and longer intervals between the distribution of food and CBT. Kalobeyei, however, had a greater incidence of severe hunger than Kakuma probably due to a longer food gap resulting from delayed disbursements. Thus, the authors of the study underscored the need to improve the timeliness of disbursements to increase efficiency and effectiveness. In particular, they highlighted importance of streamlining the disbursement process and different stages and units involved while being mindful of security concerns. Additionally, they recommended to distribute

food and CBT simultaneously or at shorter intervals to prevent food shortages. Lastly, they noted the importance of communicating disbursement dates to beneficiaries to reduce unpredictability (UNU-MERIT, 2018).

Adequacy of Benefit Level and Targeting. According to UNU-MERIT (2018), adequacy of benefit level is an important design factor that can affect program outcomes. There was more food security and consumption outcomes in Kalobeyei probably due to the higher benefit level and received per capita (KES1400) compared to the mixed modality in Kakuma (KES300-500). Within the mixed modality (Kakuma), single person households who received a higher benefit level (KES500) also seemed to have better food security and consumption expenditure outcomes than larger households (KES300 per person). The per capita market value of the transfers provided in Kalobeyei was also higher than the value of the transfers provided in Kakuma (UNU-MERIT, 2018).

Targeting gender of recipient of cash transfers matters for program outcomes. This is because intra-household allocation is influenced by whoever controls household income as this puts them in a stronger position to make expenditure decisions. In particular, gender affects spending on food and welfare within households (Handa & Davis, 2006). According to the UNU-MERIT study in Kakuma and Kalobeyei, more women than men were the principal recipients of CBT and food transfers in the two settlements. However, more women in Kakuma than Kalobeyei received the transfers which could explain the modestly higher levels of autonomy in women's decision making over the use of the CBT and large household asset purchases. Despite this, there was seemingly no better food security outcomes for households

in Kakuma or reduction in gaps in expenditures between male and female-headed households. The gender gaps could be explained by the (structural) advantage male-headed households have regarding livelihood and income sources. Baucheta et al. (2021) found cultural context is important in determining if allocating food transfers according to gender is most effective.

Other programme factors likely to produce differential effects on child nutrition outcomes are conditionality, access to health services, and participant factors (baseline stunting and maternal age seem to have differential effects on different child nutrition outcomes, demanding consideration when designing such programmes) (Manley et al., 2020).

Contextually Adaptive Programming. Programs that are designed based on evidence of the context-specific causes of child poverty and malnutrition are more inclined to have a positive impact on children's nutrition and wellbeing (UNICEF, 2023). The programs are most successful when employees in social protection and nutrition work together to create a common understanding of the evidence (UNICEF, 2023).

Nyamukapa (2016) proposed a contextually adaptive ECCE program to avoid competition for resources meant for children by adults in households with compounded vulnerabilities involving inactive adults, elderly, and PWDs. Such households are faced with competing priorities; thus, households tend to decide in favor of collective commodities rather than children needs. Contextually adaptive programming requires a discretionary approach that should determine the amounts of grants in relation to demographic characteristics and size of beneficiary household. Additionally, there should be concurrent supportive stimulating

investment projects to ECCE programmes because project beneficiaries usually divert program money to income generating activities (Nyamukapa, 2016).

Holistic Programming. As a best practice, service providers should holistically consider both positive and negative aspects of a programme before proposing one (Van Reamdonck, 2019).

3.3.4 Best Practices in Implementation/ Operation of Integrated Nutrition and Livelihood Interventions

There are important best practices in implementation/program operation besides or in addition to those concerning program design. For example, it is important to integrate food,

nutrition, health and WASH (Chava et al., 2020), and consider gender, equity, and empowerment of women (Natasha et al., 2019) and men (Ritchie, 2018; Dalaba et al., 2022). Furthermore, forming partnerships early, ensuring that measurement of nutrition outcomes and results are part of the overall Monitoring Research and Evaluation (MRE) framework, undertaking capacity development (training) of human resources, harmonizing of training materials, coordinating and integrating resources, and learning across training models, availing inputs, scaling up and ensuring sustainability are vital for success of programs (Mayer et al., n.d.)

3.3.4.1 Integrated Food, Nutrition, Health, and WASH (FNHW)

To establish connections between agriculture and FNHW in livelihood projects, coordinated efforts and inter-ministerial convergence are required to institutionalize processes and promote sustainability in the projects (Chava et al., 2020). The contributions of women's collectives and local mobilizers is essential for the success of integrating health and nutrition interventions into large-scale rural livelihoods programs (Chava et al., 2020).

According to a study carried out in Kenya, incorporating an agribusiness component into a project aimed at improving food production and nutrition can help farmers earn more money while also paving the way for better nutrition outcomes (FAO, 2021). The study, which used the TIPs (Trials of Improved Practices) methodology, showed that TIPs can be successful when applied at the community level (FAO, 2021). However, more nutrition officers (TIPs implementers) are needed, and TIPs activities must be implemented over longer periods of time, in order to finish the tasks at the household level (FAO, 2021).

3.3.4.2 Gender and Equity Considerations (Empowerment and Investment in Women)

Research by Ulrichs et al. (2017) suggested that women spend program money differently than men, and money received by women had more impact on nutrition of their grandchildren than that of men. Inclusion of a gender mainstreaming strategy in Cash Transfers focusing on gender equality sensitization campaigns, separation of distribution centers, allowing women to take up leadership roles, putting up market stalls for women, and establishing a gender-based and sexual exploitation prevention system in the livelihood programme partly explains positive results on nutrition (UNU-MERIT, 2018). There were higher levels of women's autonomy in decision making over assets purchased from the Cash Transfers in one settlement. As a result, female headed households were able to adopt credit purchasing as a strategy to counter traders' strategies of ration cuts and disbursement delays (UNU-MERIT, 2018).

In a study conducted in Ghana, the quality of infant and young child feeding practices was more strongly correlated with women's empowerment than the nutritional status of children. Women's credit decision-making empowerment was positively and significantly related to women's dietary diversity. Despite this, results of this study indicate that improved nutritional status is not always correlated with empowerment across all domains, and these domains may have different effects on nutrition (Malapit & Quisumbing, 2015).

Research carried out in Ethiopia and other low- and middle-income countries showed that cash crop production is a crucial livelihood strategy that helps change gender dynamics and livelihoods in smallholder farming households (Mechlowitz et al. 2023). In contrast, a study on

nutrition-sensitive poultry production programs implemented in four different African contexts (three rural and one urban) found that despite being heavily involved in raising chickens, women had little control over the money earned from the sale of poultry products (Nordhagen & Klemm, 2018). According to the study, encouraging women to raise chickens is ineffective without additional initiatives that specifically support women's ownership and decision-making (Nordhagen & Klemm, 2018), for instance a gender mainstreaming strategy as noted by UNU-MERIT (2018) and Mayer et al. (n.d.).

Further, targeting young and old women directly has greater potential to improve not only their diets (Malapit & Quisumbing, 2015), but also children's nutritional outcomes (Manley & Slavchevska, 2019). This is because cash transfers support young women to stay in school where they acquire health related information and old women are also able to gather and share information on nutrition (Manley & Slavchevska, 2019).

Available evidence indicates that for livelihoods programmes to achieve better nutrition and ECD outcomes, relevant livelihoods support for men is crucial (Ritchie, 2018). Men's emasculation and exclusion as they struggle to assert themselves, care for families, and negotiate 'respectable masculinity' exacerbates socioeconomic gains in households, including better nutrition and early child development (Ritchie, 2018). In a study conducted in Ghana, male participation was found to be a top nutrition-sensitive educational intervention (Dalaba et al. 2022). Encouraging male involvement was essential for promoting nutritional health in the community. Jennifer C, and Killian, (2020) posited the importance of being aware of the effects of ingrained norms/ stereotypes surrounding both ethnicity and

gender which impose artificial and frequently unhelpful limitations on implementation of gender-sensitive livelihoods programmes during crises.

3.3.4.3 Formation of Partnerships, Training and Coping Strategies

The decision to start a livelihood program should be based on positive programme-related elements, programme requirements, and client aspirations. According to Van Reamdonck (2019), stakeholders should form partnerships, implement validated livelihood programmes and address structural obstacles to refugees' abilities to become self-reliant.

Training and coping strategies are essential for dealing with insufficient/unstable incomes and to enhance self-settlement in urban contexts (Van Reamdonck, 2019). Training and support to start up and maintain a micro-business, a safe and child friendly workspace, integrational benefits of enhanced social capital, and income security enhance success of livelihood programs. In contrast, institutional barriers, an unsafe workspace, and insufficient/unstable income hinder success of such programs (Van Reamdonck, 2019).

3.3.4.4 Policy Support

According to FAO et al. (2020), the world is lagging in progress to meet the 2025 and 2030 targets for child stunting, low birth weight, and children overweight. This is partly due to food losses and inefficiencies along the food supply chain. To avert these challenges, countries need to rebalance agricultural policies and incentives in favor of more nutrition-sensitive investment and policy actions. The most vulnerable populations' ability to afford healthy diets will be increased through the implementation of nutrition-conscious social protection policies. Furthermore, policies that promote behavior

change toward healthy diets more generally will also be required (FAO et al., 2020).

According to a study by the Leveraging Agriculture for Nutrition in South Asia (LANSA) consortium, the agri-food system is governed by political commitment, power/authority, policy coherence, accountability, and capacity (Gillespie et al., 2019). Thus, development, harmonization and implementation of policies that improve the nutrition-sensitivity of agri-food systems (along with other sectoral actions), is a political task. To navigate policy agendas, it is vital to understand the competing incentives and interests of the various actors involved, including the private sector and civil society. A better understanding of governance can aid in such negotiations by assisting in the identification of opportunities, resolution of trade-offs, and strengthening of nutrition-related pathways and outcomes (Gillespie et al., 2019).

Despite recent significant advancements in the architecture and artifacts of governance systems relevant to nutrition, there is still a need to comprehend these processes and examine what is actually transpiring in terms of implementation and action on the ground. It is necessary to unpack governance in a systematic manner so as to better identify entry points and strategies for enhancing governance (Gillespie et al., 2019). Commitment, authority, responsibility, coherence, data, leadership, and capacity are the ingredients most likely to work together synergistically. These interrelated factors are the fundamental building blocks that determine how change happens even though the choice of actual policy and program actions will necessarily be driven by context-including the type of problems being faced, available solutions, and the capacity to act (Gillespie et al., 2019).

According to Nisbet et al. (2022), collaborating with governments can enhance possibilities of including the concerns of the most vulnerable populations in food security interventions, especially in the design and implementation of humanitarian aid.

3.3.5 Other ERD and Livelihoods Programming Best Practices

3.3.5.1 Self-Reliance

Self-reliance is one of the recent approaches to livelihoods programming among refugees. According to a policy brief on the effectiveness of self-reliance in Uganda refugee response (Ahaibwe & Depio, 2019), refugee education and health needs can be met better if refugees become self-reliant, agricultural livelihoods are supported, and alternative non-farm livelihoods secured. To achieve this, there is need to adopt and promote improved agricultural technologies (use of improved seeds, fertilizer, irrigation); sustainable land management practices like crop rotation and mulching; and promotion of alternative non-farm livelihoods like skilling, provision of start-up capital and mentorship.

Easton-Calabria et al. (2017) noted that to promote self-reliance among refugees, political and humanitarian actors should define self-reliance in ways that incorporate economic, social, and individual aspects, as well as broader structural contexts. Agencies should understand what self-reliance looks like for refugees, as well as their measurement of it. Thus, the focus of livelihoods aid programming should shift from looking at jobs as the markers of individual self-reliance to an approach that considers values and capabilities. Further, the definition of refugee self-reliance should incorporate refugee well-being, and non-economic and non-individualistic components

of living a fulfilling and meaningful life.

According to Easton-Calabria et al. (2017), refugee self-reliance assistance should constitute interlinked projects that address the social, political, and economic needs of refugees. Livelihood interventions designed to promote self-reliance should be based on obstacles that refugees face in their own strategies and actions and examine the roles and functions of the networked support refugees receive. Also, humanitarian and political actors should address systemic issues like barriers to work or lack of legal representation that create challenging work and living conditions for refugees (Easton-Calabria et al., 2017). Further there is a constellation of institutional, structural, and individual challenges like limited access to capital and appropriate financing schemes, limited partnerships between the private sector and NGOs, limited implementation of long-term projects, limited access to natural resources by NGOs, and limited local actor involvement in the design and assessment of investment opportunities that need to be understood. Further, there is need for guidelines on the monitoring and evaluation of humanitarian adaptations of market systems development programming (Strachan, 2021). A study by U-Learn (2023) listed other challenges to livelihoods among refugees and host communities that need to be considered such as insufficient credit from informal loan mechanisms; limited formal financial credit services; inaccessible markets; poor road networks; limited public transport; discrimination and limited social networks; limited access to land; and poor relations between refugees and host communities; discrimination; and challenges of documentation.

In addition to recognizing barriers and challenges, promotion of self-reliance needs to identify enablers in settlements both in rural and urban settings, including current coping and livelihood strategies. According to Omata and Kaplan (2013) refugees in Kyangwali and Nakivale were largely involved agriculture and animal husbandry. The most commonly grown crops were maize, beans, sorghum, cassava and potatoes, while the most commonly kept animals were goats, cattle, pigs and poultry. In addition to agriculture, refugees (including those in Kampala) engaged in other economic coping strategies along lines of nationality. For instance, whereas Congolese refugees engaged in petty trading of accessories, clothing, brokering with country of origin, tailoring, and running mini-restaurants and bars; Rwandan refugees focused on retail trading (e.g. of food commodities and other daily necessities), running bars, selling second-hand clothing and brokering. In contrast, Eritrean refugees run internet cafes and relied on overseas remittances. Somali refugees operated mini-supermarkets, restaurants, transportation services, garage businesses, and guesthouses. A large number of refugee youth from Ethiopia and Eritrea were increasingly joining the taxi business, especially those owned by their fellow nationals, while Congolese refugees were starting to join the construction industry through Ugandan companies. According to U-Learn (2023), some of these livelihoods and coping strategies (e.g. relying on remittances or other forms of informal support from friends and family) were negative or unsustainable and unreliable.

Omata and Kaplan (2013) reported that the private sector was beginning to invest in refugee settlements. For example, telecom companies had opened up businesses to take advantage of a large customer base for money transfer

services. A local beverage company had also contracted a refugee-established company to provide it with sorghum. These developments echo Strachan's (2021) observation that there is potential for the private sector to support refugee livelihoods and self-reliance in Uganda.

3.3.5.2 Training, Skilling and Business Development

Training and Skilling. Livelihood programming through skilling, financial inclusion, and support to agriculture are important strategies to increase livelihood capacities of refugees and host communities. Skilling is common among urban-based than rural-based refugees. Programmes related to skilling cover different vocational and soft skills; business training was the most common form of training. U-Learn (2023a) noted a mismatch between demand and supply of skills. Thus, the report recommended facilitation of job placements and apprenticeships for refugees, and implementation of market-driven approaches to skilling in host communities in order to match labour demands and work opportunities in refugee and host communities (U-Learn, 2023a).

According to Tibaingana et al. (2022), accelerators, hubs, incubators, and labs which form Entrepreneurial Support Organisations (ESOs) support refugees through a number of services categorized in three ways: inclusion; resilience; and innovation-led approaches. Under inclusion, ESOs focus on improving basic language skills, establishing peer relationships and increasing access to survival essentials. In Kampala, ESOs aimed to improve English language speaking, nurtured livelihood skills, built community ties and increased access to seed-corn grants as ways to enhance resilience. With regard to innovation, ESOs developed entrepreneurial skills, established extra-local connectivity and increased access to micro-

finance. Specifically, these organizations conducted skills training in hair dressing, Henna tattooing, arts and crafts, tailoring, weaving, music dance and drama, and English language. The ESOs adapted their methods and pathways to circumstances and needs of refugees, developed refugees' services/products, and marketed them.

However, the organizations faced challenges like limited ability to tailor services to the different needs of refugees because of integrating them with host communities; limited innovation-led approaches at the expense of inclusion and resilience services; limited professional teaching skills; and use of externally-driven hierarchical approaches that did not emerge from the needs and priorities of refugee communities. Thus, Tibaingana et al. (2022) recommended that NGOs and policy makers should recognise inclusion and resilience-led approaches operating within entrepreneurial communities rather than pursuing westernised views of entrepreneurial outcomes.

According to U-Learn (2021), Africa Non-profit Chore [ANCHOR] implemented a mobile Technical Vocational Education and Training [TVET] project in Rhino Camp Refugee Settlement that delivered courses in bakery and pastry making, bricklaying, concrete practice, carpentry and joinery, communication, business, and financial literacy skills. Many of the students ended up being self-employed and able to provide technical services in their communities. The training had several advantages including, increasing inclusivity, completion and certification, customisability, local employment, procurement, reducing costs, increasing access, and positively changing perceptions toward TVET. The programme, however, faced some challenges with transportation of equipment and learning materials, trainer

access, unsuitability of learning environments, poor quality of teaching, high staff turnover, unreliable communication due to remoteness and poor internet connectivity, language barriers, and lack of access to industrial placements. Despite these challenges, U-Learn (2021) concluded that mobile TVET approach is a viable approach to reach vulnerable refugees and host communities in remote areas. What was needed was having a solid understanding of the needs and constraints of target communities, engaging with local communities and authorities, and good planning.

According to Baluku et al. (2021), despite having relatively high average scores on entrepreneurial skills, refugees in Bidibidi, Kiryandongo, and Kampala had limited soft skills of communication, time management, grit, and assertiveness. This notwithstanding refugees had a high level of entrepreneurial intention and engagement. Women, however, had a stronger passion for entrepreneurship than men; men also scored relatively lower than women on soft skills. Belief in one's entrepreneurial abilities and attentiveness to entrepreneurial opportunities in one's environment were strong predictors of implementation of entrepreneurial intentions. The researchers noted, though, that in spite of support programmes from different stakeholders in form of entrepreneurial training, educational support and start-up capital, refugees continued to be hampered by acculturation dilemmas, limited access to capital and other vital resources, and poor psychological states.

The researchers observed that start-up capital is always given to few refugees and is too small to allow high impact innovation. Refugees find difficulties in engaging in cattle rearing, commercial farming, health services, quarrying, and charcoal burning. Further, refugee-owned

businesses remained small and mostly confined within refugee settlements. Some successes in refugee business were attributed to self-efficacy, mental strength, personal initiative and learning behaviour. Thus, Baluku et al. (2021) recommended continued entrepreneurial training focusing on soft skills (especially for refugee women) and mind-set change.

The Livelihoods & Resilience Sector Working Group (2023) strategic positioning paper on agricultural value chains also noted a paucity of knowledge and capacity for value addition among refugees and host communities. Further, it took cognizance of structural bottlenecks faced by these communities such as poor access post-harvest handling, storage and transport, which culminates into lack of quality products and lack of aggregation. The working group noted that these challenges could partly be solved by capacity development, training, awareness raising, education and access to contamination testing.

Humber et al. (2020) observed that whereas mobile technology could help young refugees, there were gaps in how they can harness its potential to visualise their futures and sustainable livelihoods. Thus, they underscored the need to improve access to mobile phone technology and training refugee youth to utilise it. This is because technological innovation, in particular mobile phones, are a key component of the innovation ecosystem. The researchers opined that it is vital to work with young refugees' "steering groups" to develop future policies on employment, mobile infrastructure and services. Use of participatory, visual, and co-design methods was recommended to improve understanding of how young refugees use mobile technologies; identifying capacity building opportunities on mobile phone usage in delivering learning and access to employment. Further, they underscored the value of co-

creating participatory learning and employment resources to benefit grassroots innovation and equitable access to technology.

Business Development. According to U-Learn (2023c), despite the possibility of refugee business owners benefiting from business development services to improve performance of their enterprises, access to markets and ability to compete, there seems to be no model of business development service provision in Uganda due to over reliance on donor funding. Existing approaches offer generic services, not tailored to individual needs of refugee business owners. Services like training, consultancy, marketing, technology development and transfer, and business linkage promotion do not meet the business needs of refugee business owners (U-Learn 2023c).

U-learn (2023b) noted that refugees doing businesses in Nakivale and Palabek refugee settlements faced several challenges in formalising their businesses including limited access to information, costs of registering businesses, and non-standardisation of the registration processes. Those that manage to formalise businesses face challenges in running them such as lack of capital limited access to suppliers and market opportunities, limited access to business development services, and discrimination by the host communities. Thus, U-learn (2023b; 2013c) recommended that humanitarian and development organisations should provide funding and business development services opportunities to formal refugee business owners; support market linkages for easy access to suppliers and markets; inform businesses on issues like criteria, processes, and procedures involved in business registration. They also recommend collaboration among refugee businesses to improve infrastructure in and around remote settlements.



Furthermore, according to U-learn (2023c), livelihood financing through zero-interest refugee loans, risk-tolerant loans, and digital financial solutions may become a game changer for refugee entrepreneurial development. The role of incubators in supporting of growth of refugee business was emphasized. It was,

however, noted that in Uganda incubators do not collaborate, are not familiar with the needs of microenterprises, use models not fit for microenterprises, and are located mainly in Kampala which disadvantages refugees in rural settlements.

4.0 Summary and implications of the evidence review for programming

4.1 What is the Linkage between Livelihood Programming, Children's Nutrition and Early Learning?

There is a paucity of research linking directly livelihood programming to children's nutrition and early learning. Available literature focuses either on livelihood programming (e.g. cash transfer programs) and children's nutrition, or nutrition interventions and early learning. In view of these observations, the literature was reviewed and presented under two rubrics: livelihood programming and children's nutrition and integration of nutrition into early childhood development. Regarding the first rubric, the review focused on the salient role of cash transfers in livelihoods and nutrition programming. The benefits/outcomes of Cash Transfers as well as their shortcomings were underscored.

The evidence suggests that:

- Combined interventions (livelihood programming such as improved agriculture and nutrition i.e. nutrition-sensitive livelihoods) are more efficient than separate interventions because they make use of the same facilities, transportation, and client contacts.
- Regarding integration of nutrition into ECD, evidence shows that livelihood programs such as those that KW seeks to implement, have nutritional benefits for children, and improve health, education, and household incomes.
- Integrated nutrition and ECD programs have a greater cumulative impact on nutrition and ECD outcomes than single-sector interventions. In addition, they significantly increase dietary diversity of children and mothers. KW should pay attention to how ECD and nutrition are consciously aligned within the context of a two-generation approach to maximize its potential.
- The link between livelihood programming and nutrition outcomes of children is strengthened by nutrition education. The planned KW caregiver trainings and home-based ECD in urban and rural (refugee settlement) settings should integrate nutrition education.
- Livelihood programmes that incorporate asset provision and saving training into nutrition programming enable households safeguard the dietary needs of women and young children. Given that care-giver training on livelihoods is one of the major activities under the KW two-generation approach implies that emphasis should be placed on nutrition education.
- Integrated nutrition and ECD programs improve nutrition through enhancing diet diversity, reducing stunting, enabling families to invest in better child nutrition, increasing meal frequency, and reducing incidence of illness.
- Integrated programs increase purchase of non-staple foods; programs with a Cash Transfer component increase access to services by enhancing affordability and easing transport.

- There is limited evidence linking CTs to early learning and health in Africa. Some of the reasons include a collectivist culture that encourages spending on productive assets that benefit everyone in the family rather than consumption or children's needs such as nutrition. Due to general poor quality education in rural areas, the effect of Cash Transfers may not be realized.
- The evidence shows that Cash Transfers, generally improve food security and nutrition: they increase dietary diversity, reduce adverse coping mechanisms to food insecurity such as skipping meals, increase food consumption, consumption of larger quantity of quality food, reduce stunting, and improve linear growth of children.
- Factors that enable cash transfers to influence nutrition positively, other than health outcomes and use of health services, include lower implementing costs compared to other modalities, freedom of choice at the household level, enabling policy environments, and beneficiaries' preferred choice for cash (van Daalen et al., 2022).
- Mechanisms through which Cash Transfers initiatives aimed at families with young children decrease stunting include enabling greater variety of dietary choices (e.g. consuming more foods derived from animals) and reducing incidence of illness e.g. diarrhea (Manley et al., 2020).
- Participation in Cash Transfers was linked to improvements in children's health, education, and income growth in Uganda.

Evidence from other countries suggests that children in households receiving cash transfers have fewer chances (37% less chances) of getting sick than those in non-beneficiary households. Cash Transfer Programs also greatly impact health service utilization.

- Despite the above, integrated programs are associated with limited impact in some contexts because nutritional outcomes are influenced by many factors exogenous that programs may not impact like hygiene and feeding practices, knowledge about what constitutes an appropriate diet, the seasonality of malnutrition, and other livelihood resources and cultural beliefs.
- In addition to exogenous factors, program attributes (e.g. size of transfer; timeliness of disbursements) and diminished purchasing power affect outcomes of CTs on children's nutrition and health.
- Although KW is not a transfer program, some financial support will be given to clients to boost saving groups (e.g. KRC in Kyaka II settlement) and IRC in Kampala. Thus, paying attention to factors that enable Cash Transfers to influence nutrition as well as the mechanisms through which an injection of cash into households impact nutrition (e.g. by reducing incidence of diseases) will be key during design and implementation.

4.2 What Are the Best Practices in Integrating Nutrition in Economic Recovery & Development/Food Security and Livelihood Interventions/Programs?

4.2.1 Best Practices in Program/Intervention Design

Extant literature shows that there are several best practices in program design/approach that program KW project needs to pay attention to:

- **Take cognizance of the 12 point checklist** for the design and implementation of nutrition-sensitive programs/projects developed between 2013-14, by FAO and Committee on World Food Security; the 2017 FAO **guidelines/principles for integrating nutrition into food security and livelihoods** interventions in emergencies in Pakistan—that have been adopted world-wide; and the conceptual framework on causes of undernutrition developed by UNICEF in the 1990s.
- **Pay attention to type of intervention.** There are several types of livelihood and food security interventions that could be integrated in nutrition programming like nutrition sensitive agriculture, enhancement, diversification, substitution, and climate-smart interventions. In addition to these, there are interventions which aim at enhancing social protection and reducing poverty (e.g. graduation programs). Evidence shows that:
 - Despite being associated with many, though varying positive outcomes on children's nutrition and early learning, it is difficult to single out the most preferable intervention that program designers should focus on.
 - The reviewed interventions have been implemented in different contexts, with different goals and objectives, under different circumstances. Moreover, without a study comparing outcomes of interventions, it is difficult to advocate for a particular intervention. Program designers should evaluate the evidence on outcomes of each intervention and its weaknesses in view of the goals and aims of the intended project and the context where it will be implemented.
- Program designers should seek answers to the following questions: what are the pathways or mechanisms that drive change? What could constrain or hinder the theorized pathways from delivering the desired change? What capacities/issues (intervention-specific, contextual, collaborative, technical) could be leveraged to increase opportunities to realize theorized and desirable change? How can factors that promote any program/intervention type be harnessed?
- **Pay attention to program characteristics.** Attributes such as program modality (cash, food, a combination of these; vouchers, multipurpose cash etc.); regularity of program benefits; adequacy of benefit level; and targeting (gender and person characteristics e.g. age) affect outcomes of interventions. Thus, it is important to pay attention to them during program design.
 - Available evidence shows that mixed modalities are associated with higher food security, nutrition and consumption, and that combining cash and BCC can impact greatly on chronic undernutrition.
 - Evidence also shows that multipurpose

cash can result in switching from informal to formal schooling, and avoidance of child labor.

- A change in modality from restricted to unrestricted reduces the likelihood of households reselling food handouts, while unconditional cash transfers improve consumption, child-wellbeing, and food security.
- Regarding regularity of intervention, regular transfers have been found to increase predictability, and households' ability to manage risk, and prevent negative coping strategies like buying food on credit, and high food rationing. In contrast, delayed disbursement of transfers results in higher incidence of hunger.
- Adequacy of benefit (which has to do with the size of the transfer) has important implications on nutrition outcomes: higher benefits are associated with food security and increased consumption.
- Evidence on targeting shows that gender considerations are important for project outcomes, hence an important design issue. Targeting women increases their decision making power and can have serious implications on household welfare e.g. increased purchase of household assets. This notwithstanding, cultural context must be taken into consideration in targeting women or men.

- Further, evidence indicates that program design should consider vulnerability, household composition, household size and poverty status of beneficiaries so that grants meant for children are less likely spent on collective commodities that secure everyone, than children's needs or nutrition.

- **Adopt a multi-sectoral approach.** To address malnutrition, it is recommended to adopt a multi-sectoral approach because of its capacity to leverage linkages and strengths or impacts of outcomes in sectors like WASH, social protection on nutrition.
 - It is important to understand the local context and systems, mobilize local capacities, adopt a participatory approach, and build meaningful cross-sectoral collaborations.
- **Incorporate nutrition education and behavior change communication** in programs as evidence shows it enhances nutrition outcomes.
- Other important design considerations with implications for KW are **community engagement, articulation of an evidence-based theory of change, adapting a program to context, programming holistically, forming partnerships, and training.**

Evidence indicates that a combination of the above design aspects is likely to result in better nutritional outcomes.

4.2.2 Best Practices in Implementation/Operation of Integrated Nutrition and Livelihood Interventions

The review established that there are several best practices in implementation and operation of integrated nutrition and livelihood interventions with important implications for KW project:

- It is vital to include and implement a gender mainstreaming strategy in Cash Transfers focusing on gender equality sensitization, facilitating women to lead, and preventing sexual exploitation.
- Targeting benefits e.g. CTs to women is likely to result in better nutrition and livelihood outcomes for children and better infant and young child feeding practices. This is because money received by women has more impact on children's nutrition than that of men.
- Promoting women's control over sale of agricultural products requires to support their ownership of productive assets e.g. land and animals, and decision making.
- Livelihood support for men is important to promote nutritional health in communities.
- Formation of partnerships by stakeholders, implementation of validated livelihood programmes and addressing structural obstacles to refugees' abilities to become self-reliant is vital.
- Awareness of the political economy of nutrition-sensitive programs, specifically their development, harmonization, and implementation; and discerning interests and, competing incentives of different actors is critical.
- It is also important to understand the architecture and artifacts of nutrition governance systems to know what is happening on the ground, identify entry points and strategies, identify opportunities, resolve trade-offs, and strengthen nutrition-related pathways and outcomes.

4.2.3 Best Practices in Self-Reliance, Skilling and Business Development

Based on evidence on broad ERD approaches such as self-reliance; training, skilling and business development among refugees and host communities, partners in the KW consortium might consider the following best practices:

- Building on existing coping and livelihood strategies of refugees to promote refugee self-reliance.
- Recognizing structural, institutional and individual enablers and barriers of livelihoods of refugees e.g. lack of access to land, limited access to capital and appropriate financing schemes, limited local actor involvement in the design and assessment of investment opportunities, limited partnerships between the private sector and NGOs, inaccessible markets, poor road networks, limited public transport, discrimination and limited social networks, and poor relations between refugees and host communities.
- Involving private sector actors in refugee self-

reliance (as envisaged under KW). Evidence shows that despite existing potential within the private sector, there is still limited involvement of actors from the sector in refugee self-reliance strategy.

- Dealing with the mismatch between demand and supply of business skills through training as envisaged in the KW design.
- Increasing provision of critical business skills, specifically, soft skills like communication (language skills), time management, establishing peer relationships, and assertiveness that are lacking among refugees; and encouraging more male participation in training.
- Tailoring services to needs of refugees and use of locally and culturally relevant approaches to reduce challenges to skilling associated with largely externally-driven hierarchical approaches that contribute to acculturation dilemmas.
- Contributing to designing and promoting a local model of business development service provision (including promotion of business incubators and ensuring their collaboration).
- Increasing access to information, reducing barriers of registering businesses, and standardising

registration processes.

- Providing funds and business development services opportunities to formal refugee business owners and promoting policy reforms that enhance and support refugee businesses.
- Ensuring that skilling consideration context seriously, for instance, developing a solid understanding of the needs and constraints of target communities, and engaging with local communities and authorities.
- Unbundling refugee services e.g. training, from those of host communities so as to target them appropriately given their unique circumstances.
- Recognizing inclusion and resilience-led approaches operating within entrepreneurial communities of refugees and host communities rather than pursuing westernised views of entrepreneurial outcomes.
- Improving access to mobile phone technology and training refugee youth to utilise it given that mobile phones are a key component of the innovation ecosystem; and promoting participatory approaches to technology development and use through co-designing and co-creating with refugees.

5.0 Conclusion and Recommendations

This evidence review set out to interrogate two questions: What is the linkage between livelihood programming, children's nutrition, and early learning? What are the best practices in integrating nutrition in economic recovery & development/food security and livelihood interventions/programs? There was a paucity of literature on integration of nutrition into ECD and ERD/livelihoods in refugee settings in LMICs. Thus, the review was expanded to consider literature on these subjects in humanitarian contexts in LMICs.

The evidence review emphasizes that it is crucial to understand how early learning, children's nutrition, and livelihood programming are interconnected. Despite mixed evidence on the link between nutrition and livelihood programming, livelihood programming and ECD, as well as best practices of integrating nutrition in ERD and livelihoods, highlights the potential for livelihood interventions to positively impact children's health, education, nutrition, and cognitive development, in addition to improving household economic conditions. The evidence further indicates that financial assistance (e.g. cash transfers or other forms of income support) play a very important role in integrated ECD and ERD/food security and livelihood programs.

In view of the above, the review underscores that policymakers and practitioners can more effectively support the holistic development of children in low-income communities by incorporating these elements into comprehensive development programs, for example two-generation programs like KW, whose goal is to support livelihood strengthening and resilience, whilst promoting ECD. In addition to the evidence being mixed,

the review shows that the extant literature is short on the pathways or mechanisms by which expected changes (program outcomes) should occur as theorized in the project/program theory of change. Yet, to be able to monitor project process and outcome indicators, the pathways to change must be generally clear. Therefore, it is recommended that the KW project team examine carefully, the UNICEF conceptual framework (and recent revisions made by Black et al. in 2020); the conceptual pathways between agriculture and nutrition⁶, as well as indicative pathways from social protection to nutrition⁷, with a view to combining insights from these frameworks to improve its ToC/program theory. The above conceptual frameworks are exceptions; however, they are not comprehensive. For instance, they do not shed light on pathways by which an agriculture intervention might produce desired nutritional outcomes, and or training lead to livelihoods. Also, they are silent (conceptually and practically) on how the effects of combined interventions might coalesce.

Finally, the review indicates that it is crucial to pay attention to social, cultural, political, and institutional contexts. Context is implicated in almost all aspects of programs e.g. design, adoption of a multi-sectoral approach, targeting and, implementation (e.g. community engagement). To ensure success, design and implementation of ERD/livelihoods, nutrition and ECD projects should consider contextual factors like nutrition policies, political economy, governance systems and institutions (e.g. the quality of education systems), and culture.

⁶ Adapted for Feed the Future by Anna Herforth, Jody Harris, and SPRING, from Gillespie, Harris, and Kadiyala (2012) and Headey, Chiu, and Kadiyala (2011).

⁷ Harold Alderman. (2016). "Leveraging Social Protection Programs for Improved Nutrition: Summary of Evidence Prepare for the Global Forum on Nutrition-Sensitive Social Protection Programs", 2015, World Bank, Washington, DC.

5.1 Opportunities for Future Research

Given the nascent state of the field and limited empirical evidence, more research is needed on the following:

1. How best to design and implement integrated parent and child programs, ERD/livelihood, and nutrition/food security, specifically what intervention types and program characteristics are important.
2. Assessment of pathways/mechanisms of change in integrated ERD/livelihoods and food security and ECD programs.
3. Comparison of intervention types to find out ERD and livelihood interventions suitable to be integrated with nutrition in refugee/forced displacement contexts or LMICs.
4. Evaluation of the level of effectiveness of integrated ERD/livelihood, and nutrition/food security and ECD programs.
5. The political economy of combined/integrated ERD/livelihood programs and ECD interventions in refugee contexts or LMICs in general.



Photo: The AfriChild Centre

6.0 References

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**KULEA
WATOTO**
Nurturing Children

Country Office

7 Lower Naguru E Road Kampala, Uganda

+256 (0) 800 200 506

inquiries.kuleawatoto@rescue.org

www.rescue.kuleawatoto.org

Cuthbert Aongat (Project Coordinator)

E-mail: cuthbert.aongat@rescue.org