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ACTION AGAINST HUNGER

COMMUNITY DESIGNED MALNUTRITION PREVENTION PROGRAMMES; OUTCOMES AND OPPORTUNITIES

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Disclaimer:

Insights and recommendations written in this report are a result of the research team's analysis and do not necessarily reflect the views and opinions of LSTM or Action Against Hunger.

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ACRONYMS

Acronym	Meaning
ACF	Action Against Hunger (Action Contre la Faim)
ASHA	Accredited Social Health Activist (India)
CHW	Community Health Worker
CMAM	Community-based Management of Acute Malnutrition
CPD	Continuous Professional Development
ENN	Emergency Nutrition Network
FBMAM	Fortified Blended Food for Moderate Acute Malnutrition
GMP	Growth Monitoring and Promotion
ICDS	Integrated Child Development Services (India)
IAP2	International Association for Public Participation
IMAM	Integrated Management of Acute Malnutrition
KI	Key Informant
LSTM	Liverpool School of Tropical Medicine
M&E	Monitoring and Evaluation
MAM	Moderate Acute Malnutrition
MUAC	Mid-Upper Arm Circumference
NGO	Non-Governmental Organization
PD Hearth	Positive Deviance Hearth
PLA	Participatory Learning and Action

PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
RGG	Rumoh Gizi Gampong (Village Nutrition House, Indonesia)
RUTF	Ready-to-Use Therapeutic Food
SAM	Severe Acute Malnutrition
SOFI	State of Food Insecurity (in the World)
TOT	Training of Trainers
UN	United Nations
UN OCHA	United Nations Office for the Coordination of Humanitarian Affairs
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WFP	World Food Programme
WHO	World Health Organization

WORKING DEFINITIONS

BOOLO XEEX XIBON: Meaning “Together against malnutrition” in Wolof

Community: A group of people who are brought together by something in common. This can include things like cultural background, shared experience, and geographic location. One person can belong to many different communities

Community-based approaches: Initiatives where communities are engaged as implementers or participants, but external actors retain control over programme design and management.

Community-led approaches: Initiatives where communities themselves have primary leadership and decision-making authority across all stages of the programme cycle.

Malnutrition prevention: Actions aiming to address the immediate, underlying, and systemic causes of malnutrition, spanning food security, health, WASH, and social determinants.

Moderate Acute Malnutrition (MAM): A form of undernutrition where a child's weight-for-height falls between -2 and -3 standard deviations of the WHO Child Growth Standards or a Mid Upper Arm Circumference (MUAC) between 115 and 125 mms.

Positive Deviance Hearth (PDH): A community-based nutrition programme that identifies and builds on practices of local families whose children are well-nourished despite facing similar resource constraints, using this knowledge to guide behaviour change and rehabilitate malnourished children.

Severe Acute Malnutrition (SAM): Potentially A very low weight-for-height (below -3 standard deviations of the WHO Child Growth Standards), and/or a MUAC of <115mms, or the presence of bilateral pitting oedema

Sustainability: The ability of programmes and benefits to endure over time, driven by community ownership, relevance, and capacity.

Stunting: A form of chronic undernutrition resulting in impaired linear growth, defined as height-for-age more than two standard deviations below the WHO Child Growth Standards median.

Wasting: A form of acute undernutrition characterised by a low weight-for-height ratio (more than two standard deviations below the WHO standard) and/or low MUAC and/or bilateral pitting oedema reflecting recent and severe weight loss.

EXECUTIVE SUMMARY

Substantial efforts to tackle malnutrition have spanned decades, yet global progress remains fragile and uneven, particularly in regions affected by poverty, conflict and climate change. Top-down interventions often lack sustainability when they fail to centre community leadership. While the importance of local ownership is widely acknowledged, community-led approaches, where communities drive problem identification, decision-making and implementation, remain rare and poorly documented in nutrition programming. This distinction matters: true empowerment lies at the upper end of the community engagement continuum and is essential for long-term impact. Amid growing global commitments to localisation, including by Action Against Hunger, there is an urgent need to critically examine forms, outcomes and challenges of community-led malnutrition prevention programmes. Understanding how these models function in practice can help elevate community-led approaches to the centre of malnutrition and broader disease prevention efforts. Doing so not only strengthens sustainability and local capacity but also fosters more relevant, context-specific and resilient interventions in high-burden settings.

We used a mixed-methods approach involving a targeted literature review and eight semi-structured key informant interviews. From a total of 552 records identified across databases including Scopus, Global Health, Medline, and Overton, 15 studies met our inclusion criteria and were included in the analysis. Key informants, ranging from nutrition advisors to community mobilisers were recruited through the Emergency Nutrition Network (ENN), client referrals, and the professional networks of the research team. Most informants had direct experience working in Asia and/or Africa. Data were analysed using an inductive thematic approach to identify common patterns and insights across diverse programme settings. To assess the degree of community engagement across programs, we specifically adopted the International Association for Public

Participation (IAP2) Spectrum of Public Participation as a guiding framework. This framework defines five levels of participation, ranging from minimal to full community involvement (Inform, Consult, Involve, Collaborate, Empower). Twenty-three relevant malnutrition programmes targeting children under five, implemented across 16 countries in Sub-Saharan Africa, Southeast Asia, and parts of South and Central Asia were identified in this study. More than 60% of the programmes many were multi-year and ongoing, and the remainder were short-term interventions. These programmes were implemented by a mix of stakeholders, including communities, local health systems, governments, NGOs, and international agencies either in resource-limited or humanitarian settings, with the majority in Sub-Saharan Africa. Despite broad references to "community-based" approaches, only one program-Senegal's *Boolo Xeex Xibon*-was found to be truly *community-designed*, a defining feature of a community-led model. While community participation was recorded in other programmes, actual community leadership in design and decision-making was limited.

Distinguishing between preventive and therapeutic programmes also proved challenging, as the lines between them were often blurred in both design and implementation. While preventive programmes are ideally suited for long-term behaviour change and deeper community involvement, this potential was rarely realized in practice. Many interventions that were labelled as preventive such as Indonesia's *Village Nutrition House* relied on community members primarily for delivery, not for design or decision-making, situating them lower on the IAP2 Spectrum of Public Participation. Conversely, some therapeutic programmes incorporated community engagement components but did so in ways that remained largely top-down.

Reported outcomes across programmes were generally positive. However, classic preventive programmes reported improvements in qualitative indices like

community agency, health-seeking behaviours, and local innovation. For example, *Boolo Xeex Xibon* spurred self-initiated health outreach without NGO prompting. Whereas models with which had therapeutic component laid emphasis on measurable quantitative outputs such as improved anthropometric measures. Programmes with greater community participation also demonstrated unique value in surfacing culturally specific barriers. In Zambia, participatory sessions uncovered local taboos against feeding children round-shaped foods, which had hindered consumption of locally available, nutrient-dense foods. Such insights led to targeted behaviour change strategies that might have been missed without meaningful community dialogue.

A range of challenges including funding constraints, socio-cultural barriers, and institutional scepticism was shared amongst programmes. Donor funding cycles and a focus on quantifiable results were often misaligned with the slower, systemic change was a cross-cutting barrier for programmes with highest level of community participation. Paradoxically, community ownership offered resilience; the Senegal program, for example, continued effectively even amid recent global developmental and humanitarian funding cut affecting many programmes. In addition, models situated at the higher end of the IAP2 spectrum appeared better equipped to navigate entrenched power imbalances rooted in sociocultural norms. A standout example was the Boolo Xeex Xibon programme in Senegal, which, despite operating in a patriarchal context with minimal male participation, successfully empowered women to lead across multiple phases of the programme.

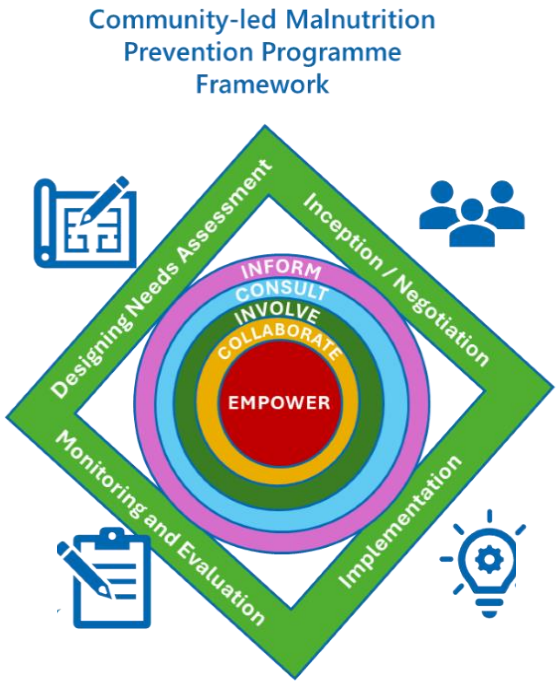


Figure 1: Model Community-led Prevention Programme Framework

Drawing from examples like the Boolo Xeex Xibon and other models with enhanced community participation, we developed a framework for an *ideal community-led approach to malnutrition prevention*. This framework integrates key steps from the project cycle with the phases of the community engagement spectrum, highlighting their intersections. At its core is a strong focus on empowering communities to independently design and implement their own initiatives without reliance on external support. The model is presented visually, followed by a table that illustrates concrete examples drawn from both our findings and innovative ideas of how this approach can be practically applied. Our findings reveal the scarcity of data on community-led malnutrition prevention programmes in SSA and SEA, despite the rhetorical labelling of programmes as such. Across both literature and interviews, few initiatives demonstrated meaningful community leadership beyond implementation, with

most falling short of the "collaborate" or "empower" thresholds on the IAP2 spectrum. While community-led approaches offer transformative potential, this study also recognises that "community" is not a homogenous or uncomplicated entity. Power hierarchies, gender norms, and gatekeeping often exist within communities themselves, complicating participation. Still, recorded insufficiencies of externally driven, top-down models, many of which are guided more by donor priorities than lived realities calls for a radical shift. Complex issues like malnutrition cannot be sustainably addressed by implementers with limited contextual understanding yet wield funding as leverage to bypass local complexities. True community-led models must confront internal and external power asymmetries and centre the agency, leadership, and wisdom of those most affected. Anything less risks reinforcing dependency rather than dismantling it.

1 | BACKGROUND

1 | BACKGROUND

Introduction

Sustainable reductions in global malnutrition remain uneven and fragile, despite decades of investment in prevention efforts. Increasing evidence suggests that top-down interventions often fail to achieve long-term change when they do not sufficiently engage and empower local communities (Gajbhiye et al. 2024; Stover et al., 2024; Veda et al. 2021; UNICEF, 2024).

In response, international agencies and donors are now emphasising the importance of community ownership as a core component of effective nutrition programming (OECD, 2024; FAO, 2002). However, the distinction between community-based and community-led approaches remains blurred in both theory and practice.

Community-based approaches involve working with communities during implementation but typically leave control over priorities, programme design, management and resources in the hands of external actors. By contrast, community-led approaches involve communities actively identifying problems, setting priorities, designing solutions, implementing interventions and monitoring results, with external actors playing a facilitative, rather than directive role (Attygalle, L. 2020).

The difference between these approaches can be mapped onto the Community Engagement Continuum which moves from lower levels of engagement (Inform, Consult) to full empowerment (Empower), (IAP2, 2024). True community-led approaches operate at the highest end of this continuum, an important but relatively rare practice in malnutrition prevention.

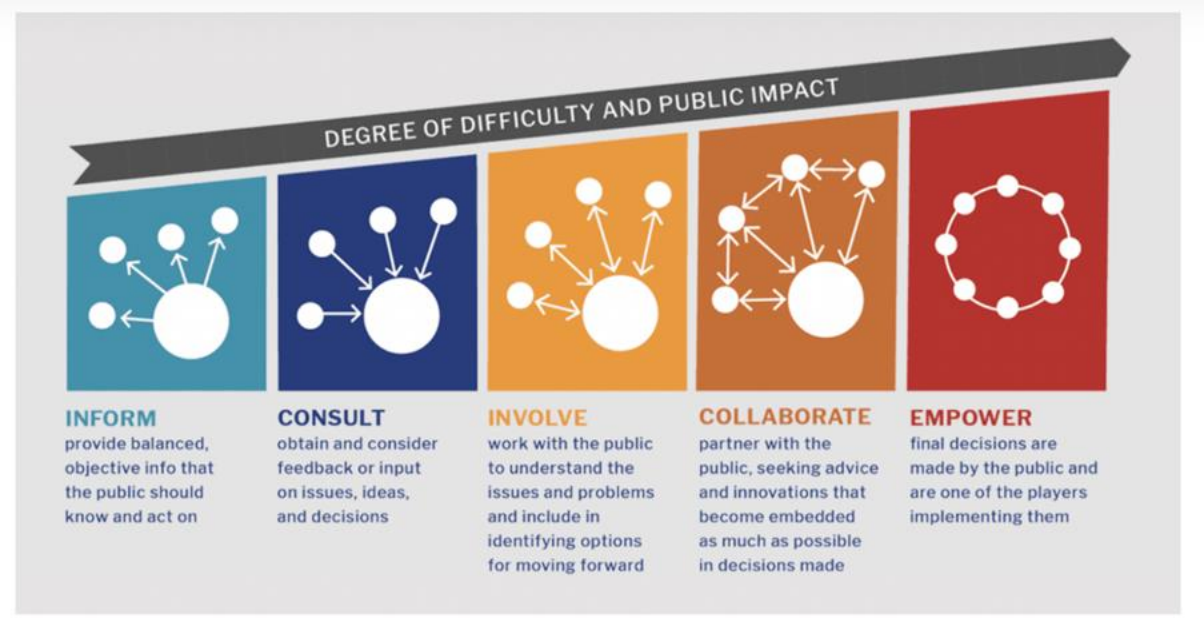


Figure 2: The Active Community Engagement Continuum (Visible network labs, 2023)

Given Action Against Hunger's (AAH) commitment to enhancing local ownership, integration, and sustainability in its programs, there is a critical need to better understand and document community-led approaches in malnutrition prevention: their forms, outcomes, challenges and potential opportunities; to strengthen programme impact, build local capacity, enhance sustainability and advance the localisation agenda.

The Global Burden of Malnutrition

The burden of malnutrition remains staggering. As of 2022, 149 million children were stunted and 49 million were wasted, contributing to approximately 900,000 deaths per year among children under five. Additionally, over 800 million people globally were affected by hunger (Kerac et al., 2022; WHO, 2024).

South Asia and Sub-Saharan Africa have the highest rates of severe child food poverty, where malnutrition is compounded by poverty, conflict, fragile health systems, and increased vulnerability to climate change (UNICEF, 2024). Together, these two regions account for over two-thirds (approximately 68%) of all children living in severe child food poverty worldwide. In Sub-Saharan Africa

alone, around 30 million children are affected. In East Asia and the Pacific, severe child food poverty affects an estimated 17 million children. (UNICEF, 2024).

Traditional nutrition interventions, often externally driven, have achieved important gains, however progress remains insufficient and highly vulnerable to disruption. External factors such as disease outbreaks including the COVID-19 pandemic and escalating humanitarian crises have highlighted the fragility of these gains, especially in the absence of strong local foundations. Additional destabilising factors include conflict and protracted crises, natural disasters linked to climate change, economic challenges such as inflation and political instability (FAO et al., 2022; HLPE, 2020). Consequently, there is growing recognition that community ownership must be central to building resilient, contextually appropriate and sustainable solutions to malnutrition, to withstand future shocks, particularly in food security and livelihoods.

The Need for Community-Led Approaches

Despite widespread use of the term ‘community participation’, empirical research reveals that true community-led approaches are still rarely implemented or rigorously studied in malnutrition prevention.

A systematic review by Pilkington et al. found that the majority of participatory interventions operated at the Consult or Involve stages, but not at the Empower stage (Pilkington et al., 2017). Similarly, a 2022 scoping review of community engagement in health by Kretchy et al. concluded that few studies systematically assessed community leadership or long-term empowerment outcomes (Kretchy et al., 2022).

Specifically in nutrition (FOA 2003):

- Programmes labelled as community-based nutrition often involve externally defined priorities and methods

- Only limited evidence exists linking community-led nutrition prevention with specific outcomes such as reductions in stunting or wasting
- Monitoring frameworks typically capture participation rates but not decision-making authority, a critical marker of empowerment

Moreover, there is almost no formal evidence base comparing community-led versus community-based nutrition programmes in terms of sustainability, ownership, or resilience (George et al., 2015).

This gap justifies urgent attention both for strengthening programme impact and for operationalising global commitments to localisation.

Relevance of This Study

Current Sector Priorities: The Localisation Agenda

The relevance of this study is heightened by current shifts in the humanitarian and development landscape, notably the growing emphasis on localisation.

Following commitments made under the Grand Bargain (2016) and reaffirmed at the 2023 Humanitarian Summit, agencies and donors, including UN agencies, ECHO and international NGOs, have pledged to put local actors in the lead wherever possible (UN OCHA, 2024). However, progress has been uneven. Recent analyses show that despite rhetoric, only 4.5 % of international humanitarian funding reached local actors directly in 2023 (Development Initiatives, 2024).

Compounding this, USAID's recent budget cuts have raised concerns that funding for localisation and community-driven development programmes may diminish at precisely the time when they are most needed to foster resilience, sustainability, and cost-effectiveness ((Locks et al., 2025). This makes strengthening the evidence base for community-led approaches, particularly in

high-burden areas like malnutrition, a strategic priority for agencies such as AAH.

Alignment with AAH's Strategic Goals

AAH's operational learning highlights that insufficient integration of community participation often limits local ownership and sustainable impact of interventions. By systematically exploring existing community-led models in malnutrition prevention, this research will generate practical insights and recommendations to support AAH's ambitions to lift community voices, improve programme relevance and strengthen local resilience.

It directly contributes to AAH's objectives of:

- Enhancing multi-sectoral programming,
- Strengthening sustainability and exit strategies,
- Increasing community ownership from the design phase onward.

Potential Advantages and Challenges of Community-Led Approaches

Advantages

A growing body of research suggests that community-led approaches can yield multiple benefits (Howard-Grabman & Snetro, 2003; Veda, G. et al., 2021; OECD, 2024):

- Increased relevance and cultural appropriateness of interventions
- Higher uptake of behaviours and services, such as improved IYCF (infant and young child feeding) practices
- Greater sustainability, as community-driven solutions are more likely to be maintained post-external funding

- Strengthened social capital and resilience, with communities better equipped to address future shocks independently

Participatory learning and action (PLA) cycles, village health committees with real decision-making authority, and indigenous leadership in nutrition-sensitive agriculture are some documented examples where community-led approaches have led to measurable improvements.

Challenges

However, community-led programming is not without its challenges (George et al., 2015; OECD (2024)

- Initial time investment is often greater compared to externally designed programs
- Power dynamics within communities can limit inclusivity, particularly for marginalised groups
- Capacity building needs can be substantial, particularly in fragile or crisis-affected contexts
- The focus of donor funding cycles on short-term achievements often hinders investment in the longer-term development of community leadership

These challenges must be acknowledged and addressed through deliberate design, flexible funding and robust monitoring frameworks.

Research Questions and Objectives

This report seeks to enhance understanding of community-led approaches to malnutrition prevention, with a focus on their outcomes, challenges, and opportunities.

Research Questions:

- What types of community-led programmes currently exist in malnutrition prevention?
- What are the different outcomes of community-led approaches on malnutrition prevention?
- What are the challenges of current existing community-led programmes?
- How can we strengthen community participation from the design stage in malnutrition prevention programmes?

Objectives:

- To give an overview of community-led malnutrition prevention programs
- To determine short term and long-term outcomes of community-led approaches in preventing malnutrition
- To identify the challenges faced by current community-led programs
- To provide recommendations that encourage community involvement from the design stage in malnutrition prevention programs
- To describe measures that enhance the sustainability and effectiveness of community participation from the design stage in malnutrition prevention programs

2 | METHODOLOGY

2 | METHODOLOGY

We used a mixed-methods approach involving a targeted literature review and semi-structured Key Informant Interviews. This allowed us to obtain a broader understanding of existing programmes whilst also exploring reflections beyond published literature. Findings from both sources were integrated through a thematic analysis to build a comprehensive understanding of current practices, gaps, and future recommendations. Table 1 shows the timeline for our data collection.

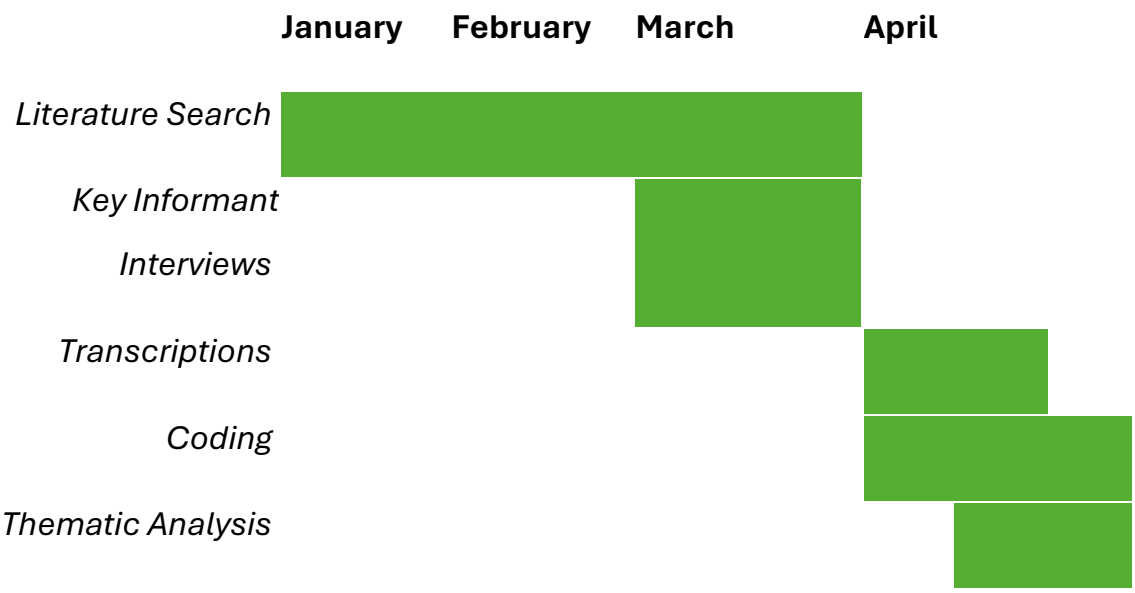


Table 1: Data Collection Timeline

Literature Review

To ensure a comprehensive understanding of existing community-led malnutrition prevention programmes, we conducted a structured literature review using a variety of internal documents, published and grey literature. Search terms have been included in Appendix G. The search strategy was refined using inclusion and exclusion criteria outlined in Table 2.

Inclusion	Exclusion
Published in English or French	Articles not published in English or French
Published in the last 10 years	Published before 2014
Focuses on children under 5	Articles focused on populations older than 5 years without specific analysis of children under 5
Settings: sub-Saharan Africa and Southeast Asia	Studies conducted outside of sub-Saharan Africa or Southeast Asia
Peer reviewed (for journals)	Non peer reviewed literature
Human studies	Animal studies or laboratory only studies
Community involvement required (the intervention must involve community participation at any stage)	Malnutrition prevention programmes that do not involve the community at any stage

Table 2: Desk-based Research Inclusion and Exclusion Criteria

All identified records were imported into Endnote to remove duplicates. Records were further screened for the title and abstract based on the above criteria. Finally, we conducted a structured charting exercise to organise and further assess the eligible studies, including general information and our objectives (see appendix H for more detail). Each study was systematically charted to evaluate how closely it matched our specific focus on community involvement. Studies that met the criteria were then analysed thematically alongside the interview data. This integrated approach allowed us to increase the depth of our findings. Figure 3 illustrates the literature selection process in the form of a PRISMA flow diagram, including numbers of records identified, screened, excluded and included.

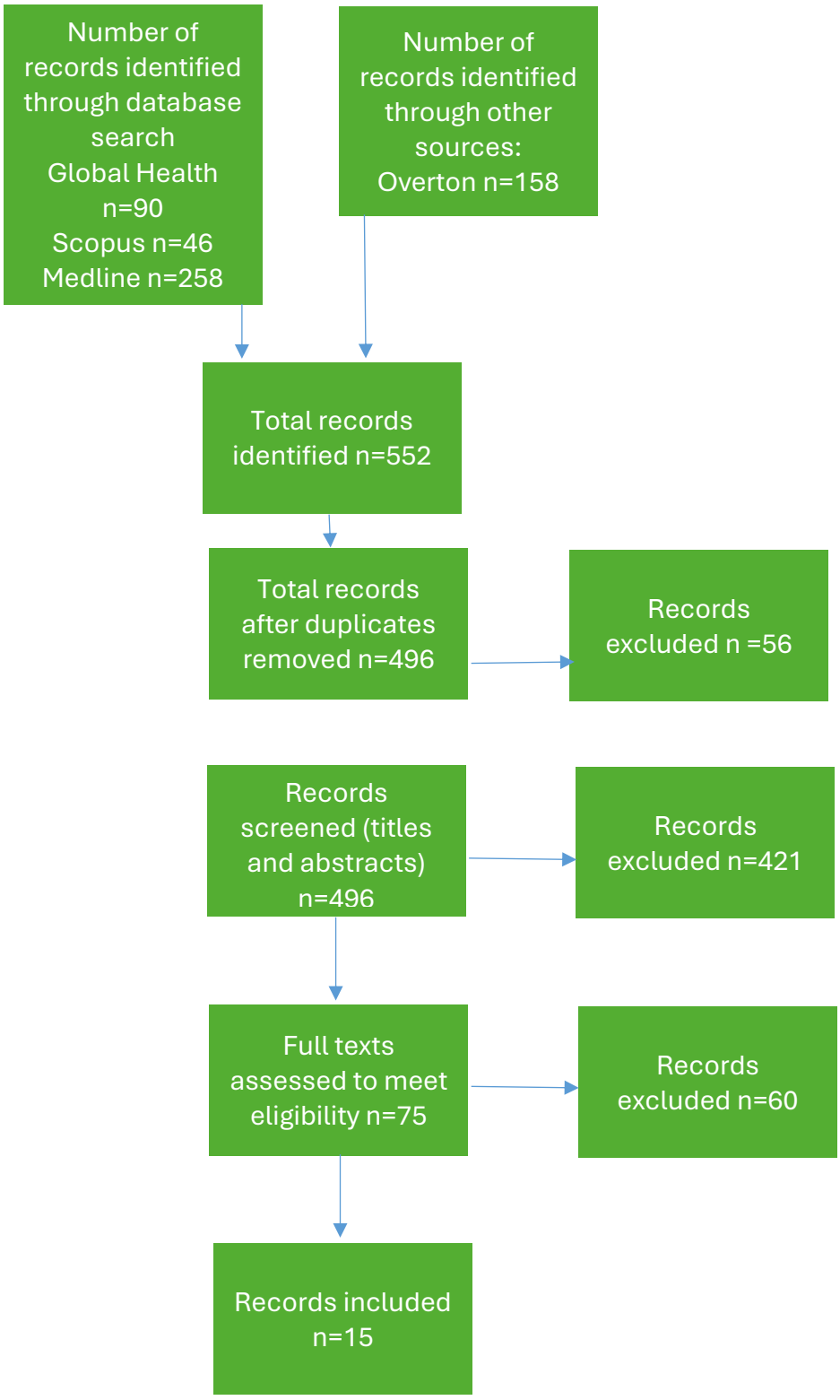


Figure 3: PRISMA Flow Diagram of Desk-based Research

Interviews

Key informant interviews with public health experts and nutritionists were performed across March and April. We used a purposeful sampling method to ensure a diverse and knowledgeable group with firsthand community malnutrition-prevention programmes.

Initial participants were identified through:

- Direct referrals from our client organisation
- Emergency Nutrition Network (ENN) forum posting
- Personal professional networks of the research team

Participants included programme managers, community mobilisers and nutrition advisors. The inclusion criteria for the informants were anyone who is or was involved in a malnutrition prevention programme that directly involved the communities they worked with and based in sub-Saharan Africa or Asia. Figure 4 represents the countries where key informants indicated their community-led malnutrition prevention programmes were implemented.

Figure 4: Countries of Programmes Listed by Key Informants

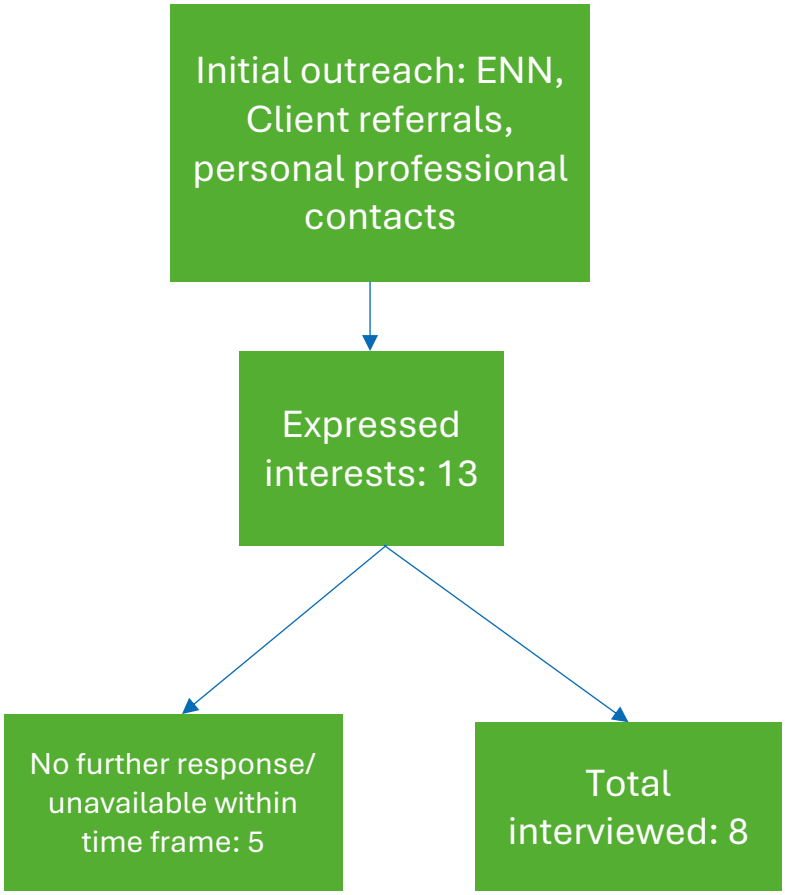
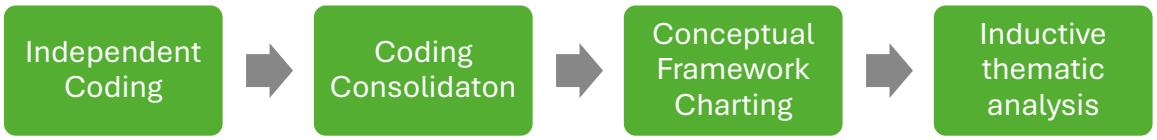


Figure 5: Interview Recruitment Process Flow Diagram

Semi structured interviews were conducted to allow flexibility but also covering key domains relating to our research objectives. All analysis was done manually through MS Word, see Appendix H for conceptual analysis charting.

Data analysis following transcriptions included several structured steps:



Ethical Considerations

Ethical approval for this study was obtained from the Liverpool School of Tropical Medicine (LSTM). All participants provided written consent prior to the interviews and provided verbal consent prior to interview initiation. Researchers conducted interviews via MS Teams, and confidentiality was ensured through saving interview notes onto the LSTM dual-authentication OneDrive. Anonymity was assured through excluding identifying details of informants.

Trustworthiness

Efforts to ensure trustworthiness included:

- Keeping a logbook of meetings and decisions made throughout the project
- Open reflections on positionality and potential influence on the research process and outcomes
- Peer-review of transcripts and group analysis of data
- Using exact quotes from interviews
- Frequent liaisons with client and coach to ensure external credibility

Interview Summaries

Key Informant 1

- **Location**: India, South Asia
- **Context and demographic**: High malnutrition rates, rural and semi-urban communities; children under 5, caregivers, pregnant women, adolescents
- **Focus**: Community-based management of acute malnutrition (CMAM), early detection, treatment and referral, infection prevention, kitchen gardens, local capacity building
- **Challenges**: Supply chain issues, community acceptance, government changes, disaster-related access barriers (droughts, floods)

Key Informant 2

- **Location**: Global (focus on refugee camps and displaced populations, e.g., Chad, Uganda, Ukraine)
- **Context and demographic**: Refugees, internally displaced persons (IDPs), host communities; children under 5, caregivers, pregnant and lactating women
- **Focus**: Community-based management of acute malnutrition (CMAM), infant and young child feeding (IYCF), mother-to-mother support groups, family MUAC screening, positive deviance hearth (PD Hearth)
- **Challenges**: Funding shortages, climate disasters, sustaining gains without durable solutions, adapting to diverse cultural contexts

Key Informant 3

- **Location**: Kenya, East Africa
- **Context and demographic**: Urban poor communities; children aged 6–59 months, caregivers (primarily mothers)
- **Focus**: Positive Deviance Hearth (PDH) approach for malnutrition prevention and treatment, community mobilisation, local food-based rehabilitation, capacity building of community health promoters
- **Challenges**: Initial scepticism from health workers, mindset shift away from external aid dependence, resource limitations

Key Informant 4

- **Location**: Senegal, West Africa
- **Context and demographic**: Rural villages; children under 5, caregivers (especially women)
- **Focus**: Fully community-led program; community-driven analysis, intervention design and management; small grants for community initiatives
- **Challenges**: Initial dependency mindset, male non-participation in one village, donor flexibility needs

Key Informant 5

- **Location**: Ghana, West Africa
- **Context and demographic**: Rural and semi-urban communities; children under 5, pregnant and lactating women, adolescent girls
- **Focus**: Community-based management of acute malnutrition (CMAM), supplementary feeding, nutrition-sensitive agriculture (GROWING project), infant and young child feeding (IYCF), adolescent anaemia prevention
- **Challenges**: Cultural beliefs (spiritual causes of malnutrition), traditional healer influence, health worker turnover, logistical gaps in clinical supplies

Key Informant 6

- **Location**: Global (notably Burundi, Bangladesh, Uganda, Nepal, DRC, Niger, Mauritania)
- **Context and demographic**: Food insecurity, fragile settings, rural low-resource communities; children under 5, caregivers (mothers, fathers, adolescents)
- **Focus**: Community-led Positive Deviance Hearth (PDH) for malnutrition prevention and treatment, growth monitoring, food systems strengthening
- **Challenges**: Climate change, disaster vulnerability, resource access, initial scale-up resistance, sustaining community engagement

Key Informant 7

- **Location**: Balochistan Province, Pakistan
- **Context and demographic**: children 0-5 years, pregnant and lactating women, Adolescent girls aged 0-19
- **Focus**: Existing community basic health units with outpatient therapeutic programme (OTP), administering nutrition supplements, screening, communication sessions on malnutrition and community mobilisation
- **Challenges**: Government funding, outreach, low literacy rates among mothers, some communities' desires did not match the programme

Key Informant 8

- **Location**: Afghanistan, Egypt, India, Kenya, Kyrgyz Republic, Madagascar, Mozambique, Pakistan, Portugal, Syria, Tajikistan, Tanzania, Uganda
- **Context and demographic**: Rural communities, Agriculture industry, children 0-5 years, adolescent girls, pregnant and lactating women, conflict areas
- **Focus**: Several projects and involves different interventions depending on the geographical context and needs of the communities. Community determines the specific focus of each project, ranging from malnutrition in adolescent girls to farmers promoting diet diversity and food security. Long term community engagement
- **Challenges**: funding, limited freedom to work depending on geographical context, existence of multiple existing health issues

3 | RESULTS AND DISCUSSION

3 | RESULTS AND DISCUSSION

This review sought to describe community-led malnutrition prevention programmes targeting children under five years of age in Sub-Saharan Africa and Southeastern Asia, implemented within the past ten years. Through desk-based literature search, 13 relevant programmes were identified, while 10 programmes were identified from key informant interviews resulting in a total of 23 programmes that were analysed. These programmes were distributed across 16 countries in Sub-Saharan Africa, Southeast Asia, and parts of South and Central Asia. Most of the programmes were implemented in Sub-Saharan Africa (13, 56.5%) across countries such as Ethiopia, Uganda, Zambia, Ghana, Gambia, Zimbabwe, Senegal, and Sudan. Six programmes (26.1%) were implemented in Southeast and East Asia, primarily in Indonesia, Vietnam, China, and Bangladesh. Three programmes (13.0%) were implemented in South and Central Asia, notably in Nepal and Iran. One programme (4.3%), CDC's IMMPaCt, operated across multiple countries including Ghana and Nepal. These programmes were implemented by different stakeholders, including local health systems, government ministries, international organizations, and non-governmental organizations.

The duration of these programmes varied widely, with some being short-term (less than one year), while others were ongoing or multi-year interventions. 8 programmes (34.8%) were short-term (less than a year), 12 programmes (52.2%) were multi-year (more than one year), and 3 programmes (13.0%) were ongoing programs. In terms of programme types, 9 (39.1%) were trials (6 field trials and 2 clinical trials), 8 (34.8%) were community-based Interventions, 4(17.4%) were implementation research (Pre- and Post-Comparison Studies), 2(8.7%) were multi-sectoral and Long-term Initiatives and 1(4.3%) was a Policy-driven Prevention Model. Most of these programmes (12, 52.2%) were implemented in resource-limited settings, with underfunded health systems, limited infrastructure, and poor access to essential nutrition services while a few

(17.4%) operated in humanitarian settings affected by conflict, displacement, or food insecurity, an example was Family MUAC was implemented in refugee camps in Sudan. See Table 3 for a full description of programmes identified.

3.1 | COMMUNITY-LED VS COMMUNITY-BASED

Although many of the programmes analysed involved local community leaders and volunteers in their execution—reflecting a broadly community-centred approach, only one programme explicitly identified itself as community-designed: the Boolo Xeex Xibon programme in Senegal. This distinction is significant, as "community-designed" was considered a defining feature of community-led programmes in this review, differentiating them from the broader category of community-based interventions.

While the terms community-based and community-led are often used interchangeably in the literature, this review applied a more rigorous framework to distinguish between the two. Specifically, we adopted the International Association for Public Participation (IAP2) Spectrum of Public Participation as a guiding framework for assessing the level of community engagement (International Association for Public, 2018). The IAP2 Spectrum outlines a five-step continuum, ranging from minimal to full community participation:

1. Inform – where implementing bodies provide balanced and objective information to the public.
2. Consult – where communities are asked for feedback, which is then considered in planning and decision-making.
3. Involve – where the community is actively engaged in identifying issues and contributing to possible solutions.
4. Collaborate – where decision-making is shared between implementers and the community, with community contributions integrated as far as possible.

5. Empower – where decision-making authority rests entirely with the community, and the community is responsible for implementation. Figure 6 outlines the number of programmes that fall into each level:

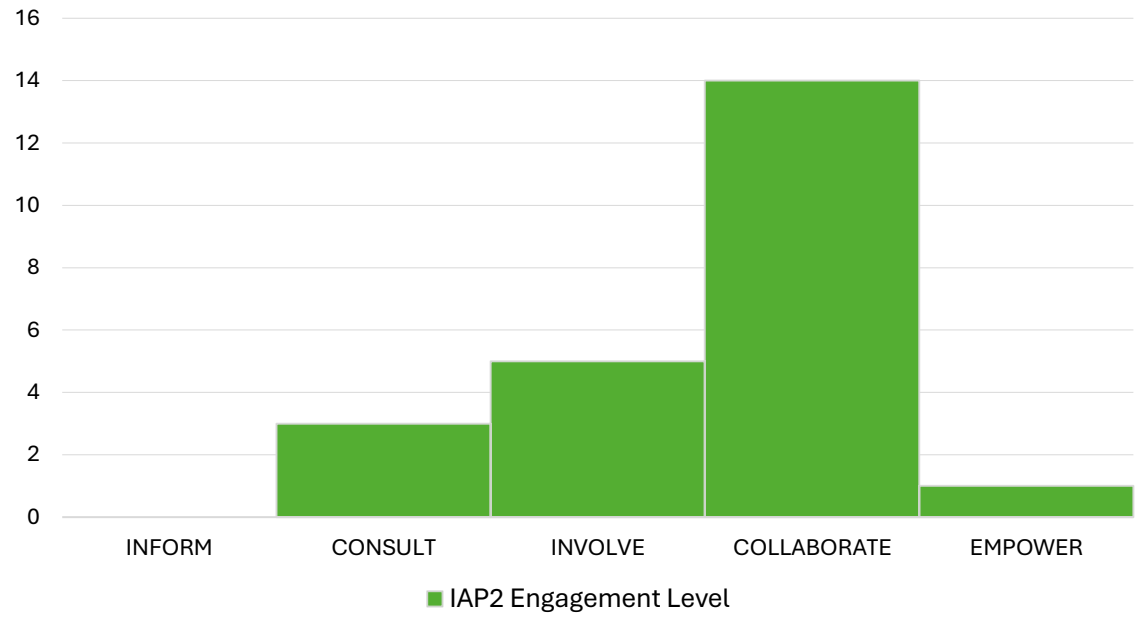


Figure 6: Number of programmes identified in each IAP2 Engagement Levels

This finding underscores a critical gap between community participation and genuine community leadership in nutrition programming. While community-based models are widely implemented, very few programmes transfer full decision-making power to community members, raising important considerations for future programme design and policy. This gap was evident across both peer-reviewed and grey literature, with most studies describing interventions where communities participated in implementation but did not necessarily hold decision-making power or ownership over programme design and resource allocation (MacFarlane, AE, 2021).

3.2 | PREVENTIVE VS THERAPEUTIC PROGRAMMES

Another blurred area in the literature, as well as in interviews, was the distinction between preventive and therapeutic programs. This distinction, though not always clearly articulated from our findings, was a key focus of our review. We sought to clarify which programmes were primarily preventive. This distinction has direct implications for how communities are engaged, and therefore how a programme aligns with the community-led model, especially when assessed using the IAP2 Spectrum. Preventive programmes often require long-term behaviour change, local knowledge, and sustained engagement with families and community structures. As such, their success tends to hinge on deep, meaningful community involvement—ideally at the higher end of the IAP2 Spectrum (Collaborate or Empower) (IAP, 2018).

When communities help design, deliver, and sustain preventive interventions, the likelihood of effectiveness and sustainability increases (Haldane et al., 2019). In contrast, therapeutic programs, which often respond to acute needs with top-down delivery (e.g., treatment of severe malnutrition), are more likely to operate in the Inform or Consult stages of the spectrum, with limited community leadership (Lau et al., 2025). In this sense, the preventive–therapeutic distinction directly influences the degree to which a programme can be considered community-led. Programmes designed for prevention often have a greater potential and need for community leadership in both design and implementation. However, our findings revealed most of the programmes that were preventive interventions, were not community-led in the reality of how they were implemented. Preventive programmes such as Indonesia's Village Nutrition House—where village midwives and local leaders led maternal counselling and home gardening—and the ERKADUTA model, which relied on community cadres to monitor households, could not be considered truly community-led. In both cases, there was little evidence that communities were involved in designing the interventions (Sutinbuk et al., 2024, Sufri et al., 2023).

By contrast, therapeutic programs, which address acute malnutrition through clinical treatment, often emphasize efficiency, speed, and adherence to protocol. These imperatives can sideline meaningful community participation, reducing engagement to the Inform or Consult levels. In Uganda's CMAM program, for example, caregivers provided feedback but were not involved in programme design. Although recovery rates ranged from 75–86%, caregivers still struggled with food insecurity and inconsistent counselling—factors that could have been mitigated through deeper local involvement (Gagnon-Dufresne et al., 2022). Similarly, in global refugee contexts, Family MUAC training enabled mothers to screen children for malnutrition using simple arm circumference tapes (Ritu Rana, 2021). Yet, as one interviewee remarked, "Mothers screen children even when health workers can't visit—but they don't shape the program." (KI 7,2025). This typifies Inform-level engagement: transactional, necessary, but not transformative.

Even when therapeutic programmes strive for integration, their approach to community engagement can remain superficial. The Rainbow Project in Zambia involved community volunteers in home visits, aligning with the Collaborate level. However, decision-making still rested with NGOs, and issues like intra-household food sharing diluted the intervention's impact. The IMAM programme in Vietnam, which reformulated RUTF to resemble traditional foods, consulted communities on taste but excluded them from decisions around distribution and resource control highlighting a consistent pattern where integrated models promise community involvement but maintain top-down control.

3.3 | OUTCOMES FROM COMMUNITY-LED MALNUTRITION PREVENTION PROGRAMMES

Programmes reviewed in this study, whether community-led or based yielded a wide range of positive short- and long-term outcomes in reducing under 5 malnutrition in the contexts where they were implemented in SSA and SEA. Programmes which were identified as preventive on the high end of the IPA

spectrum like BOOLO XEEX XIBON focused on identifying and addressing systemic drivers of malnutrition by promoting community agency, while therapeutic programmes primarily focused on identification and treatment of acute malnutrition mainly by providing RUTFs, improving caregiver knowledge and practices, and increasing access to nutritious foods.

> ***"The narrative really changed... not sitting around waiting for things to happen, but rather like—we have ideas, we have vision." (KI 5, 2025)***

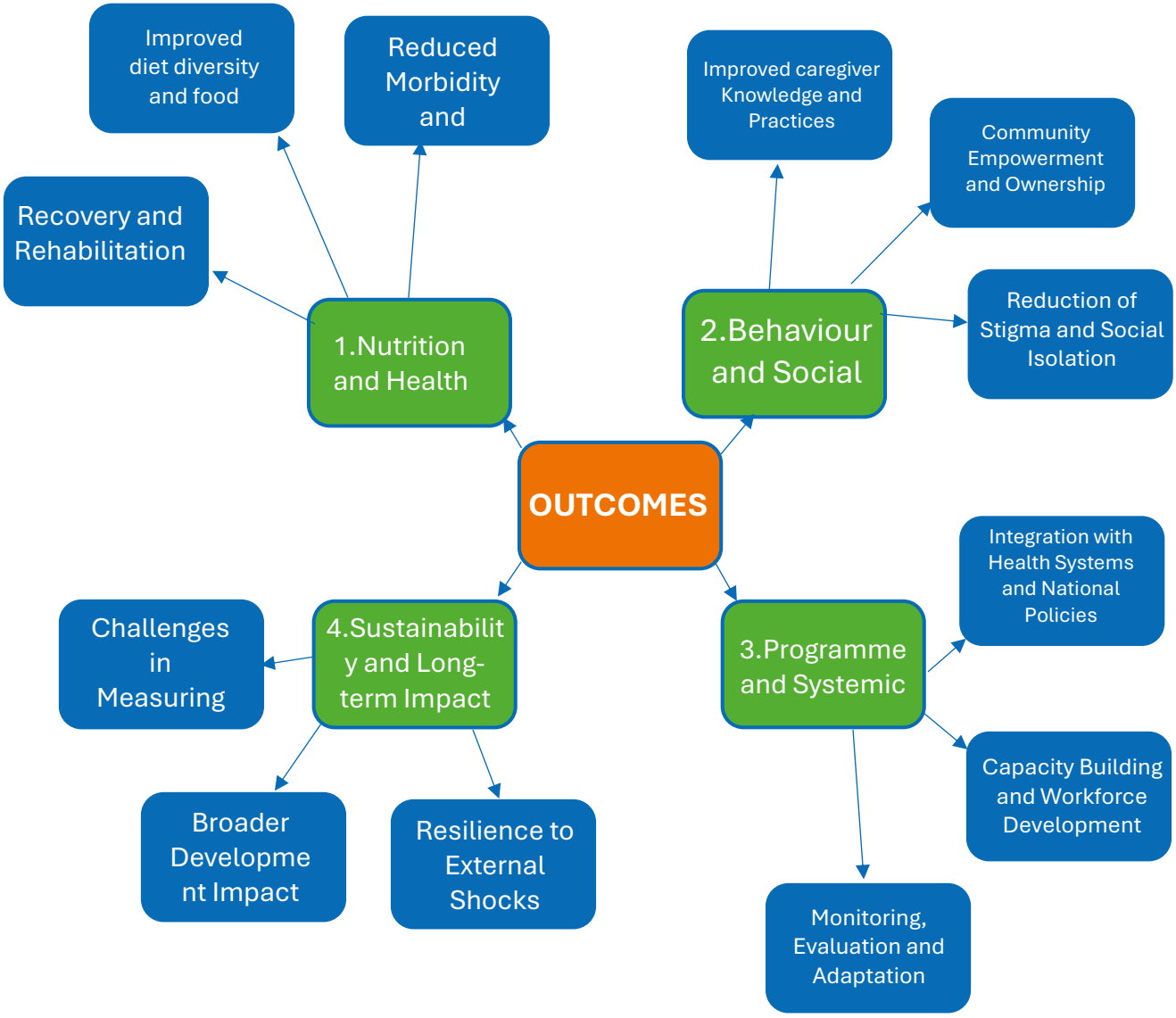


Figure 7: Summary of Main Identified Outcomes

This divergence in programme objectives was also evident in outcomes and metrics used. Preventive programmes relied more heavily on qualitative indicators such as improved community cohesion, enhanced agency, and shifts in care-seeking behaviour to assess impact. Conversely, therapeutic programmes were assessed predominantly through quantitative indicators, such as rates of wasting, weight gain, and recovery time, allowing for more immediate statistical validation of outcomes.

> ***"Improved MUAC Measurements was a key metric for identifying and enrolling pregnant women in the dry ration programme" (KI 5, 2025)***

In the BOOLO XEEX XIBON programme, statistically significant changes in the prevalence of malnutrition were not observed. This is consistent with the complexity of quantitative indicators and the short timeframe of measurement. However, the baseline to current comparisons particularly around intermediate indicators like health-seeking behaviours, dietary practices, and self-reported improvement in wellbeing were essential to substantiate qualitative claims of progress. A similar pattern was observed with the Heifer Nepal which was also high in the spectrum albeit not like the BOOLO XEEX XIBON reported improved child nutrition but also strengthened local capacity, increased household income, and fostered community pride and initiative (AAH, 2024).

Another notable feature of the community-led programme is their capacity for innovation. In BOOLO XEEX XIBON programme in Senegal, the community identified gaps in antenatal care and vaccination access. They successfully negotiated with local health facilities to arrange monthly outreach visits—an initiative that was entirely conceived and executed by the community itself, with

no prompting from NGO implementers. The KI also indicated that this bypassed the delays typically associated with bureaucratic NGO procedures.

Even among programmes designed by external implementers, a high level of community participation was often instrumental in achieving health targets by uncovering culturally specific barriers to child nutrition. In one programme in Zambia, participatory sessions with community members revealed a prevailing food taboo—the belief that feeding children round-shaped foods like mangoes, oranges, guavas, and eggs would lead to infertility later in life. Despite the local abundance of these highly nutritious foods, they were systematically excluded from children's diets.

> ***"In Zambia, for example, we realized there was a food taboo that round food would make their children infertile" (KI 6, 2025)***

This insight, surfaced through community dialogue and observation, enabled targeted behaviour change strategies that maximise local nutritional resources which were affordable and available. Conventional programmatic assessments without adequate community participation might overlook these cultural determinants. However, a critical gap persists in how success is conceptualized and measured. Many impactful elements such as trust, local ownership, cultural shifts, or empowerment are not easily captured through conventional quantitative indicators. As our interviews highlighted, donors often prioritize measurable, short-term outcomes such as recovery rates, weight gain, or reduced stunting, which may align with therapeutic models but fall short in capturing the broader systemic and behavioural transformations seen in community-led approaches.

3.4 | CHALLENGES

While common challenge areas such as funding constraints, cultural barriers, and operational hurdles were observed across all programmes in this review (as illustrated in the graph below), their nature and intensity varied widely. These differences often reflected the specific local context and, importantly, the degree of community participation, as mapped along the IAP2 Spectrum of Public Participation used in our analysis.

Figure 8: Summary of Key Challenges

Programmes across the spectrum highlighted funding constraints as a major barrier, particularly programmes implemented in refugee camps and resource-limited settings. These barriers included uncertain donor support and short-term funding cycles, which undermined their ability to plan sustainably or achieve long-term impact. These financial pressures were often compounded by donor preferences for rapid, quantifiable results expectations that frequently clashed with the slower, transformative goals of community-led models.

> ***"We have all these funding challenges...you need to think what community-based initiatives can support themselves" (KI 2, 2025)***

> ***"Many organisations would want to identify or do work which is more quantifiable...But it sometimes is not in line with priorities of the community" (KI 4, 2025)***

Despite these challenges, community-led programmes demonstrated greater resilience in the face of funding instability. The BOOLO XEEX XIBON program, for example, deep community ownership enabled sustained activities regardless of external financial support. As one key informant noted - drawing a comparison to programmes heavily dependent on U.S. government funding:

> ***"When the USAIDS cuts came, my first reaction was: my community is not going to suffer...because they are empowered" (KI 4, 2025)***

While USAID was not directly funding the Senegal program, this comment highlighted how autonomy and local leadership could insulate initiatives from these kinds of unprecedented disruptions which top-down models are vulnerable too. However, even community-led programmes are not fully

insulated from donor dynamics; they too depend on external funding to operate. This reliance creates a fundamental tension between *donor accountability* and *end-user accountability*. Donors may be more comfortable entrusting resources to organizations that offer established reporting mechanisms and hierarchical oversight, and community-led models may be perceived as financially risky due to their highly decentralized structure (Greenhalgh and Montgomery, 2020).

Another major theme was socio-cultural barrier; however, how it manifested and was addressed varied significantly between therapeutic and preventive approaches. Local beliefs, traditions, and norms often shaped the community's response to interventions, sometimes impeding both uptake and effectiveness.

> ***"Healthy-looking children are not allowed to play with malnourished children" (KI 5, 2025)***

Unlike therapeutic programs, preventive approaches—especially those with high community participation—were typically more attuned to local contexts and better equipped to navigate socio-cultural barriers. Stigma and resistance were more pronounced in programmes with limited community engagement, often leading to low participation (KI 6, 2025). With enhanced community participation, however, these issues might have been mitigated, since a strong sense of ownership among community members can foster open dialogue, reduce blame, and promote greater inclusion and shared responsibility.

> ***"The narrative really changed...no longer sitting around and waiting for things to happen, but rather like – we have ideas, we have vision" (KI 4, 2025)***

Nevertheless, even preventive programmes are not immune to dominant gender norms or entrenched social hierarchies in the contexts where they operate. In Senegal, for example, male disengagement emerged as a notable challenge. However, unlike top-down models that might enforce prescribed participation, the programme adopted a more adaptive and respectful approach by allowing women to take the lead without imposing involvement. This strategy honoured organic leadership structures and avoided tokenism. At the same time, this highlights the need for longer-term gender strategies that move beyond short-term operational flexibility toward more sustained, structural change in implementing community-led programs.

One challenge that was more specific for models at higher end of the participation spectrum was initial scepticism from stakeholders including communities themselves about whether real results could be achieved without outside resources. There was a sense of doubt about whether communities, could do the work with external intervention for complex issue as malnutrition.

> ***"The biggest challenge was overcoming initial scepticism among some health workers about achieving results without external resources, but community buy-in was strong" (KI 5, 2025)***

This kind of scepticism is understandable but often underestimated as a barrier. When working with models that flip traditional power dynamics by putting communities fully in charge, it's not surprising that donors or even frontline implementers might have doubts. But what stood out across the example the quote above is referring was how quickly those doubts faded once communities mobilized themselves. Seeing communities take ownership, design solutions, and push things forward without waiting for permission often became the turning point as was the case of BOOLO XEEX XIBON (AAH, 2024).

3.5 | CASE STUDIES

BOOLO XEEX XIBON: A Community-Led Approach to Malnutrition Prevention in Rural Senegal

BOOLO XEEX XIBON meaning "uniting against malnutrition," in the Senegalese local language is a community-led programme based in the Louga region of Senegal, targeting four small, socially cohesive rural villages, each with approximately 800 residents. The initiative aims to develop and demonstrate a sustainable, community-driven model for malnutrition prevention by empowering local populations to lead every stage of the intervention process. This foundational commitment to community ownership and leadership distinguishes BOOLO XEEX XIBON

from other types of malnutrition prevention programs. The programme redefines "community" not merely as a geographic location but as a locally rooted, socially cohesive, and self-organizing group capable of making decisions and implementing change. This emphasis on empowerment ensures that development is not externally imposed but internally driven and sustained.

> ***"The community for us, they own the project. We are not doing anything without the community input…You want indicators, the community is going to tell me how success looks like and then I'll report back" (KI 5, 2025)***

From the outset, BOOLO XEEX XIBON prioritized community involvement. The entire first year was dedicated to a facilitated process in which communities themselves identified the underlying causes of malnutrition. Villagers selected appropriate interventions, managed their own budgets (approximately £5,000 per village), and even initiated additional solutions, such as bringing antenatal care services closer to home. This participatory approach fundamentally shifted

attitudes, transforming community members from passive recipients of aid to proactive agents of change.

> ***"We wanted someone from the community to take a little bit more leadership...it was often a community health worker to show us what they were doing and only asked for support where needed. And we respected the decision" (KI 4, 2025)***

Community health workers played a pivotal role, often taking on leadership responsibilities and serving as liaisons between the programme and the broader village. The program's structure ensured that community members were involved at every stage, from planning and implementation to evaluation. By allowing communities to define success, select interventions, and manage resources, this programme fostered a sense of agency and sustainability.

Positive Deviance Hearth (PD Hearth): A preventive-therapeutic model

The Positive Deviance Hearth (PD Hearth) programme is a widely implemented, community-driven intervention designed to tackle child malnutrition in resource-limited settings. With a 15-year history across more than 40 countries, PD Hearth empowers communities to discover and amplify successful local solutions, offering a sustainable alternative to traditional top-down nutrition programs. However, while the programme is highly participatory in its implementation was design by an external actor.

PD Hearth centres on the principle that some "families-despite facing the same poverty and constraints as their neighbours-manage to raise well-nourished children". Through a process called Positive Deviance Inquiry, community members and programme staff work together to identify the specific feeding, care, and health-seeking practices of these "positive deviant" families. These locally sourced solutions are then shared with caregivers of malnourished children through hands-on "hearth" sessions, where participants prepare and

feed nutrient-dense meals using locally available, affordable foods-often including indigenous ingredients that are typically overlooked but highly nutritious. An example highlighted by a KI was the scenario in Zambia, where they discovered a local vegetable called blackjack and after running a nutritional analysis, they found that it was very high iron, vitamin A, vitamin C, zinc and the included this in the hearth meals so that it could be accessible even to the most economically disadvantaged children treated for malnutrition.

PD Hearth's participatory methodology ensures that community members are involved from the start, including formative research, programme design, and implementation. This approach builds local capacity and fosters ownership, as the community selects committee members, hosts hearth sessions, and contributes food and resources.

"When I do travel to these various countries in Africa and Asia, I usually have to stay a good amount of time to do a good formative research and to help design menus that are locally appropriate" (KI 6, 2025)

"The PD Hearth process taps into local wisdom for successfully treating and preventing malnutrition and spreads that wisdom throughout the community" (KI 6, 2025)

Volunteers, often mothers from the community, lead the sessions and follow up with home visits to support sustained behaviour change. This high level of community participation ensures sustainability and local commitment. Our key informant emphasized that the strength of the PD Hearth programme lies in its contextualized approach. Unlike other prevention programmes that focus on delivering generic educational messages, often resulting in increased knowledge but little practical application-PD Hearth ensures that all behaviours and messages are tailored specifically to the community's context.

> ***"But these behaviours and these messages are different because they're contextualized for the community" (KI 6, 2025)***

4 | SUSTAINABILITY AND RECOMMENDATIONS

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4 | SUSTAINABILITY AND RECOMMENDATIONS

For a community-led malnutrition prevention programme to be truly sustainable, it must extend beyond short-term interventions. It should become part of everyday life-shaped by the people who live in the community and built on their values, culture, and experiences. Evidence from desk research and key informant interviews consistently highlights the importance of strategies that are contextually relevant, structurally integrated, and culturally aligned (Gillespie, Menon and Kennedy, 2015; UNICEF, 2020). The following themes provide a roadmap for designing and sustaining impactful community-led malnutrition prevention programs.

Culturally Appropriate Education and Locally Rooted Communication

Effective nutrition education must resonate with the community's cultural context and be delivered through familiar, trusted channels. Key informants emphasized approaches such as storytelling, folk media, and community champions as powerful tools for engagement.

> ***"Using local language and actors made the programme feel like it belonged to us [community members]" (KI 8, 2025)***

Research supports the idea that aligning with local belief systems and involving community members as educators leads to more effective and sustainable outcomes (Moramarco *et al.*, 2018; Michael *et al.*, 2024). The Boolo Xeex Xibon project in Senegal reflected this principle by grounding its engagement in locally valued Islamic principles of consultation. Community discussions were not only

accepted, but they were also culturally expected, reinforcing the program's legitimacy and acceptance (Action Against Hunger *et al.*, 2025).

Ongoing Training and Capacity Building (CPD)

Long-term impact is closely linked to the strength of local capacity. Sustainable programmes invest in continuous training for community health workers and caregivers, empowering them to identify and respond to malnutrition. A key informant from India noted the importance of building on existing structures for effective integration:

> ***"Building on the existing structure of ASHAs and Anganwadi workers allows nutrition programmes to integrate smoothly without creating parallel systems. Trust is already there; we just have to equip them better" (KI 1, 2025)***

The Boolo Xeex Xibon project's proactive training-conducted before funding allocation-demonstrated how upfront capacity building in budgeting, marketing, and governance can reduce risk and enable confident implementation (Action Against Hunger *et al.*, 2025). These grassroots strategies help decentralize knowledge and foster shared responsibility, making communities more resilient in the long run (USAID, 2015).

Community-Based, Asset-Driven Approaches

Sustainable programmes leverage local assets instead of focusing on deficits. Farmers, healers, mothers, and teachers all bring valuable skills and insights. Recognizing and involving them as co-creators strengthens programme relevance and community buy-in.

> ***"External trainers worked directly with local farms to promote cross-sector learning and make nutrition knowledge more accessible." - (KI 6,2025)***

Contextual Intelligence and Intensive Mobilisation

Programmes that take time to understand local dynamics-social, ecological, and institutional-are better positioned to build trust and commitment. Intensive community mobilisation, conducted through established local networks, leads to stronger engagement. Women, particularly mothers, often play pivotal roles in mobilisation efforts. Their leadership as local champions were critical in shifting community attitudes and behaviours.

> ***"We started teaching mothers to be able to do things themselves... it changed how the whole community approached malnutrition." - (KI 4, 2025)***

In the Boolo Xeex Xibon project, women not only participated but led income-generating initiatives, acquired financial and leadership skills, and reinvested profits into community development. Their empowerment evolved naturally from involvement into leadership, transforming them into central actors in both nutrition and village governance (Action Against Hunger *et al.*, 2025).

Policy Alignment and Government Partnership

Embedding community programmes within broader policy frameworks enhances scalability and longevity. When aligned with national health strategies and legal structures, community-led initiatives gain both legitimacy and access to wider resources (World Health, 2017). Boolo Xeex Xibon illustrated how community-led dialogue with local health officers can lead to system-level improvements-such as reducing ambulance fees and enhancing maternal care services-without external imposition, but by the communities themselves after being empowered through dialogue and organization.

Inclusive Programme Design and Peer Support Systems

Sustainability requires inclusion. Programmes should reflect the full diversity of the community and remove participation barriers. Peer-led initiatives, such as Ghana's "Munz Kum" mother-to-mother support groups, create safe, accessible spaces for learning (KI 5). In Boolo Xeex Xibon, inclusivity was built into the programme through rotating leadership roles, participatory forums, and targeted support for vulnerable households.

Participatory Evaluation and Adaptive Learning

Sustainable programmes must evolve with the communities they serve. Participatory evaluation methods that value lived experience and local insight are key to this process.

Further Reflection

Sustainability is not about artificially sustaining programs; it is about embedding them naturally into the social, cultural, and institutional life of the community. By focusing on local capacities, culturally resonant education, government partnerships, and participatory learning, community-led malnutrition prevention can grow from a project into long lasting movements.

Such approaches have a significant long-term impact; by fostering community participation it tends to strengthen social cohesions, encourage collaboration, shared responsibility and collective problem solving. As communities engage in regular dialogue, manage shared resources, and make joint decisions, trust deepens-not only between community members but also between communities and external actors such as NGOs and health systems.

Furthermore, these approaches promote gender empowerment by recognizing the role of women-especially mothers and caregivers-as leaders, educators, and economic contributors. When women are trusted with managing income-generating activities and health promotion efforts, they gain not only financial

independence but also social recognition and decision-making power within households and the wider community (Bhutta *et al.*, 2013).

Finally, the cost-effectiveness of community-led initiatives is increasingly evident. When communities are involved in planning and implementation, resources are used more efficiently, duplication is minimized, and solutions are more likely to be accepted and maintained. Projects like Boolo Xeex Xibon demonstrate that even modest investments can yield high returns when communities are positioned as agents of change rather than passive beneficiaries.

In summary, sustainability is not a static goal but a dynamic, relational process. When interventions are designed with cultural integrations, they lay the foundation for resilient, inclusive, and economically sound models of health and nutrition that can last well beyond the funding cycle.

The ideal model for a community led design in malnutrition prevention

Drawing on examples like the Boolo Xeex Xibon and other models with enhanced community participation, we developed a framework for an *ideal community-led approach to malnutrition prevention*. This framework integrates key steps from the project cycle with the phases of the community engagement spectrum, highlighting their intersections. At its core is a strong focus on empowering communities to independently design and implement their own initiatives without reliance on external support. The model is presented visually, followed by a table that illustrates concrete examples drawn from both our findings and innovative ideas of how this approach can be practically applied.

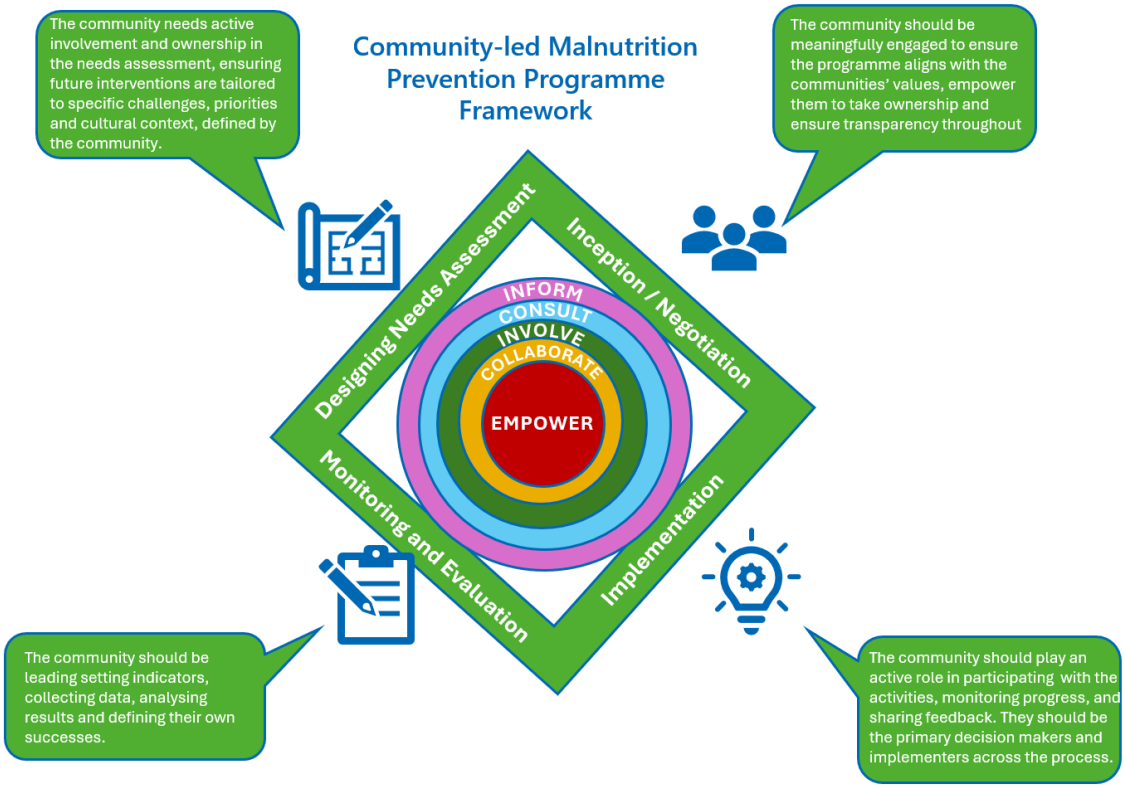

Figure 1: Community-led Malnutrition Prevention Programme Framework

	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
Needs Assessment	*Early detection of co-morbidities e.g. HIV/ AIDS as crucial risk factors in malnutrition*	*Community – mapping and food identification* *Community members identify causes of low clinic attendance*	*Train community members to collect and interpret data* *Peer enumerators* *Ensuring diversity in trained data collectors- marginalised communities e.g. adolescent girls*	*Co-analysing malnutrition causes* *External experts (e.g. agriculture experts) working with villagers- environmental scan co-led with communities- e.g. identify snails as locally available protein source*	*Frontline workers and university students conduct interviews and FGD themselves to understand feeding beliefs and local barriers* *Community- defined indicators and success* *Budget decisions handled locally* *Final interventions prioritised by community* *Family MUAC*

Inception / Negotiation	*Information sessions led by the community, radio announcements and visual materials that explain the intention of the programme, and the community involvement level*	*holding focus group discussions with a range of community members. Ensure that underrepresented members are involved.* *Use community suggestion boxes, questionnaires, consult people on location, timing or format of proposed activities, e.g. preferences for activities.* *Use local languages. Use a snowball approach to find other community members that would be useful in contributing to the programme*	*Community show/tell what malnutrition is to them, mapping out nutrition system with locals, use community walk through sessions to explore new food options and spark discussions with the use of local expertise and resources (asset-based approach, define project goals and outcome indicators* *Find local frontline workers e.g. ASHAs, local college students* *Co-lead partnership, co-writing plan*	*Create a planning committee that is majority community members. Only need a facilitator to be involved externally. Communities choose the nutrition strategies, and plan budget.* *They should be responsible for site selection, type of work done and level of engagement.*	*Community votes, development of leadership plan, community sets up terms of engagement.*
Implementation	*Use of community posters, mass*	*Consulting established groups –*	*Community kitchens and cooking*	*Nutrition mentors through local*	*Elected community members-*

	media including TV and radio	*e.g. women's groups what kind of agricultural input is most useful for food security* *E.g. monthly reflection and replanning meetings*	*sessions – mothers and healthcare workers – contribute food, track children's intake* *Community volunteers and caregivers manage SFPs, supervise cooking sessions, distribute rations, help to teach feeding practices*	*volunteers implementing rota* *Education: co-design and deliver behaviour change modules with local leaders tailoring content* *Collaborate with local farmers to established institutes- e.g. kitchen gardens attached to Anganwadi centres* *ASHA model- - lead counselling sessions and follow up at household level*	*representative and inclusive of marginalised* *Mother to mother support groups: Peer-led mother breastfeeding groups* *Use of village dashboards – posting monthly summaries in public areas* *Barazas- public community gatherings for collective problem solving and community decision making* *Community gardens – locals to plant desired produce* *Community certification and national/ regional recognition - " Graduate Villages" when they meet their own goals*

Monitoring & Evaluation	*Share project plans and M&E framework from the start.*	*Conduct baseline consultations using focus groups, participatory mapping, SMART surveys.*	*Include community actors in data collection and feedback interpretation.* *Example indicators: % households visited monthly, # of mothers attending IYCF education sessions*	*Co-analyse findings with local taskforces; adapt strategies together. Train community members to collect, verify and interpret data. Volunteers lead community events and share updates with local groups* *Example indicators: # of MUAC screenings conducted, % of identified cases referred* *Score cards – ranking programme quality and service access – used to co-plan corrective actions*	*Enable communities to define success, oversee their own results, and suggest improvement mechanisms/* *Use triangulated evaluation / external auditors with neutral facilitators and sociologists for accountability.* *Use of community-defined indicators: Improved household food variety dietary diversity score* *Community review meetings – held quareltery with visual tools e.g. stones/ yarns for low literacy groups*

Table 3: Examples and Indicators for Each IAP2 Leve

5 | STUDY LIMITATIONS

5 | STUDY LIMITATIONS

We recognise some study limitations of our research project. Firstly, our sample size of participants was less than anticipated originally; despite utilising widely regarded forums such as the ENN. This could have been mitigated by recruiting earlier and therefore expanding the timeframe to conduct interviews or directly contacting potential informants from our literature search. However, we still feel we reached saturation with the existing interviewees and obtained valuable insights. Although the recruitment process clearly specified that we were looking for 'community-led' programmes, some programmes of KI's were more 'community-based'. This emphasises a lack of understanding from both the KI's and us as the research team. Given the limited number of truly community-led malnutrition prevention programmes, we made a conscious decision to include insights from both community-led and community-based projects as well. While this risks blurring the conceptual boundaries of our research, we felt that including these provided richer and more informative data. We believe it reflects the current realities of this area of malnutrition prevention, and that future research may benefit from a more exclusive focus on community-led projects as more become available.

Another limitation is that we did not interview community members to gain their perspective on the community-led approaches. While interviewing key informants such as community mobilisers and project implementers provided invaluable insights into their programmes, these accounts may not fully capture the realities and true perceptions experienced by the communities they served. Incorporating community perspectives would have provided a more authentic understanding of how behaviour change, and empowerment is experienced.

6 | CONCLUSION

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We fully acknowledge and commend the tireless efforts of institutions and individuals working on the frontlines to tackle the complex challenge of malnutrition in partnership with communities. However, in the context of the growing global emphasis on localisation and the decolonisation of aid, the discourse around community leadership in resilience and recovery has gained prominence, so much so that many interventions are now labelled community-led'.

This research set out to examine whether such labels reflect actual practice. Using the IAP2 Spectrum, a globally recognised framework for public participation. We analysed 23 relevant programmes implemented over 16 countries in Africa and Asia to explore their depth of community engagement. Our findings reveal a disconnect; many interventions were branded as 'community-led yet lacked key components of community design. It was this very feature that set the Boolo Xeex Xibon apart, unlike the majority, it demonstrated strong community participation across multiple phases right from it design. We also observed a grey area between preventive and therapeutic programmes, with many initiatives overlapping in ways that made classification difficult. While preventive programmes, in theory, require long-term behaviour change and deep community involvement, in practice they often mirrored top-down, treatment-oriented approaches further blurring the lines and limiting community ownership.

A clear pattern also emerged around programme focus. While all interventions aimed to address malnutrition, most were oriented toward quantitative outcomes such as prevalence of malnutrition rather than the deeper qualitative indicators that often reflect sustainable, community-driven change. Notably, programmes with the highest levels of participation tended to report more

qualitative outcomes, such as improved community cohesion, empowerment and health behaviours. This distinction complicates the evaluation of malnutrition prevention, as true change including reduction in disease prevalence takes time and intersects with social determinants best addressed through empowered local action. Building on lessons from Boolo Xeex Xibon and other high-participation models, we propose a framework for an ideal community-led approach. This model integrates the IAP2 Spectrum into each phase of project development and implementation, offering a more nuanced and practical pathway toward authentic community leadership, the most promising front in the fight against malnutrition.

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APPENDICES

Appendix A- Terms of Reference (final version)

Organisation and Department	Action Against Hunger
Project Title	Review of community led programmes on prevention of malnutrition
Date:	October 2024
Background	AAH is an international NGO which focuses on tackling hunger and providing assistance to communities affected by malnutrition and humanitarian crises. AAH works in situations of conflict, natural disaster and chronic food insecurity. Witnessing that weak promotion of community participation throughout projects and insufficient integration across different sectors hinders local ownership and sustainable impact of interventions, AAH wants to lift up the voices of local people. Active community involvement to address malnutrition challenges in the design, implementation, and evaluation of programmes should ensure that proposed solutions truly meet local needs and adapt to the specific realities of the communities we serve.
Research Title	Community- led prevention of malnutrition; Outcomes and Opportunities
Research Questions	1. What types of community-led programmes currently exist in malnutrition prevention? 2. What are the different outcomes of community-led approaches on malnutrition prevention? 3. What are the challenges of current existing community-led programmes? 4. How can we strengthen community participation from the design stage in malnutrition prevention programmes?
Objectives	1. To give an overview of community-led malnutrition prevention programmes 2. To determine short term and long-term outcomes of community-led approaches in preventing malnutrition 3. To identify the challenges faced by current community-led programmes 4. To provide recommendations that encourage community involvement from the design stage in malnutrition prevention programmes 5. To describe measures that enhance the sustainability and effectiveness of community participation from the design stage in malnutrition prevention programmes
Methodology	

	• Desk research and scoping literature review of community-led programmes in malnutrition prevention • Key Informant Interviews with public health experts in nutrition using a snowball approach • Data Analysis: mixed methods analysis including descriptive statistics for the survey data and thematic analysis for the interviews data

Appendix B- Terms of reference (original version)

The original TOR included an online survey for implementers, but this was dropped due to limited added value beyond what could be captured through Key Informant Interviews and time constraints. Internal documentation was available for only a single project, so it was integrated into the broader scoping review rather than treated as a standalone analysis. The review also shifted from asking "How many community-led programmes currently exist in malnutrition prevention?" to "What types of community-led programmes currently exist?"- a change made to keep the scope manageable and avoid the risk of incomplete or non-exhaustive coverage. The research questions were further refined for clarity and practicality-for instance, shifting from assessing the "impact" of community-led approaches, which is difficult to measure in nutrition due to multiple covariates, to exploring their 'different outcomes'. Also, shifting from descriptive aims about strengthening participation measures, which may be too vague, to offering actionable recommendations to improve community involvement, specifically focussing on programme sustainability and effectiveness from the design stage onward.

Organisation and Department	Action Against Hunger
Project Title	Review of community led programmes on prevention of malnutrition
Date:	October 2024
Background	AAH is an international NGO which focuses on tackling hunger and providing assistance to communities affected by malnutrition and humanitarian crises. AAH works in situations of conflict, natural disaster and chronic food insecurity. Weak promotion of community participation throughout projects and insufficient integration across different sectors hinders local ownership and sustainable impact of interventions. Active community involvement to address malnutrition challenges in the design, implementation, and evaluation of programmes should ensure that proposed solutions truly meet local needs and adapt to the specific realities of the communities we serve.
Research Title	Community designed malnutrition prevention programmes; Outcomes and Opportunities.
Research Questions	1. How many community-led programmes currently exist in malnutrition prevention? 2. What is the impact of community-led approaches on malnutrition prevention?

	3. What are the challenges of current existing community-led programmes? 4. How can we strengthen community participation from the design stage in malnutrition prevention programmes?
Objectives	1. To determine the number of community-led malnutrition prevention programmes. 2. To determine short term and long-term outcomes of community led approaches in preventing malnutrition. 3. To identify the challenges of current community led programmes. 4. To describe measures that strengthen community participation from the design stage in malnutrition prevention programmes.
Methodology	1. Desk research and scoping literature review of community-led programmes in malnutrition prevention 2. Key Informant Interviews- public health experts in nutrition 3. Review NGO internal documents

Appendix C -Participant Information Sheet

Title of research study: Community- led prevention of Malnutrition; Outcomes and Opportunities

Liverpool School of Tropical Medicine, Action Against Hunger

Thank you for considering participating in this study which will take place March-April 2025. This information sheet outlines the purpose of the study and provides a description of your involvement as a malnutrition expert and rights as a participant, if you agree to take part.

1. What is the research about?

This study explores community-led programmes in malnutrition prevention, examining their types, outcomes, and challenges. It aims to provide an overview of these programmes with a focus on how community involvement and leadership can be effectively integrated into the design and implementation of malnutrition prevention programmes. It aims to assess both short-term and long-term impacts and identify challenges they face. The study also seeks to recommend strategies for strengthening community involvement from the design stage, with a focus on improving sustainability and effectiveness in tackling malnutrition.

2. Do I have to take part?

It is up to you to decide whether to take part. You do not have to take part if you do not want to. If you do decide to take part, I will ask you to sign a consent form which you can sign and return in advance of the interview or sign at the meeting.

3. What will my involvement be?

You will be asked to take part in an interview (online) about your experience with community-led malnutrition prevention programmes you have been involved in, either currently or in the past. It should take up to one hour to complete. The interview will be audio recorded for the purpose of transcription, interpretation and analysis.

4. Why have I been selected?

You have been selected due to your expertise in this subject matter and your perspective will provide valuable insights into effective strategies and interventions for preventing malnutrition through community-led programmes.

5. How do I withdraw from the study?

You can withdraw from the study at any point before April 10th 2025 without having to give a reason. If any questions during the interview make you feel uncomfortable, you do not have to answer them. Withdrawing from the study will

have no effect on you. If you withdraw from the study, I will not retain the information you have given thus far, unless you are happy for me to do so. If you wish to withdraw, please contact @ananya.mathai24@lstmed.ac.uk before April 10th, as this is the planned timeframe for transcription and analysis.

6. What will my information be used for?
I will use the collected information for an MSc Student Consultancy Project that we are conducting with Action Against Hunger and for research publication.

7. Will my taking part and my data be kept confidential? Will it be anonymised?
The records from this study will be kept as confidential as possible. Only myself and authorised researchers, including other students and supervisors from the study team will have access to the files and any audio tapes. Your data will be anonymised – your name will not be used in any reports or publications resulting from the study, unless you specifically request this. All digital files, transcripts and summaries will be given codes and stored separately from any names or other direct identification of participants. Any hard copies of research information will be kept in locked files at all times.

8. Who has reviewed this study?
This study has undergone ethics review in accordance with the LSTM Research Ethics Policy and Procedure.

9. Data Protection Privacy Notice
The LSTM Research Privacy Policy can be found at:
https://www.lstmed.ac.uk/lstm-privacy-statement
The legal reason for LSTM doing research with participant data is described in law as the "performance of a task carried out in the public interest" (GDPR Article 6.1e).
To request a copy of the data held about you please contact:
dataprotection@lstmed.ac.uk

10. What if I have a question or complaint?
If you have any questions regarding this study please contact the researcher Ananya Mathai, on ananya.mathai24@lstmed.ac.uk.
If you have any concerns or complaints regarding the conduct of this research, please contact the LSTM Research Ethics Committee (REC) via lstmrec@lstmed.ac.uk

If you are happy to take part in this study, please sign the consent sheet attached/below.

Appendix D–Interview Consent Form

CONSENT FORM

Title of research study: Community- led prevention of malnutrition; Outcomes and Opportunities

Name of researcher:

PARTICIPATION IN THIS RESEARCH STUDY IS VOLUNTARY

I have read and understood the study information dated 31st January 2025. I have been able to ask questions about the study and my questions have been answered to my satisfaction.	YES / NO
I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions. I understand that I can withdraw from the study at any time without having to give a reason and there will be no adverse consequences if I choose to withdraw.	YES / NO
I agree to the interview being audio recorded	YES / NO
I understand that the information I provide will be used for an MSc Student Consultancy Project and research publication and that the information will be anonymised.	YES / NO
I understand and agree that my words may be quoted in publications, reports, web pages, and other research outputs. I understand that I will not be named in these outputs unless I specifically request this.	YES / NO
I understand that any personal information that can identify me will be kept confidential and not shared with anyone other than authorised researchers and the study team.	YES / NO

Participant name:

Signature: _____ Date _____

Interviewer name:

Signature: _____ Date _____

Project contact details for more information: ananya.mathai24@lstmed.ac.uk

Appendix E–Interview Topic Guide

Existing programmes:

1. **How can you describe your current community-led malnutrition programme and the type of community targeted?** *Prompts*: *duration, type of organisation, country, rural/urban, type of livelihood, religion, gender, definition of community, key stages, objectives, budget, sector*
2. **What was your role in the programme?** *Prompts:* responsibility
3. **What is the aim of the programme with respect to malnutrition prevention** *Prompts: -burden of diseases or, improving quality and quantity of diet, Mental Health, Food Security, WASH, Gender, Health and Nutrition, Literacy and safety*
4. **How was the community involved in the project and at which stage were they involved?** Full design stage including decision on activities, semi-design stage with adaptation of activities, implementation stage, monitoring and evaluation, feedback. Which methodology was used for it? *Prompts: Tools and techniques*

Outcomes:

1. **How do you assess the effectiveness of these programmes in reducing malnutrition rates?** *Prompts:* monitoring indicators, baseline/endline study, qualitative tools to track progress, social impact study, feedback mechanism…
2. **What changes have you noticed within the community since the programme started?** *Prompts:* morbidity/mortality, scale-up to other communities, cognitive changes, knowledge, dietary practices, access, malnutrition prevalence.

Evaluation/challenges:

1. What challenges have you encountered while implementing the programme? What would you do differently and why? *Prompts*: funding, technical, engagement

Strengths

What were the key strengths of the programme(s)?

Suggestions:

1. Based on your experience, what recommendations would you suggest to other organizations to enhance the efficacy of community-led initiatives?
2. How scalable are community-led initiatives? Which conditions need to be met to scale up these initiatives?
3. To your understanding, how scalable are the programmes implemented?

Appendix F–Coding Framework

Objective 1: Overview

1.1 Description – context: geography, population
1.2 Target population
1.3 Community definition
1.4 Time period
1.5 Programme design- specify where on the community engagement scale this is: Inform/ Consult/Involve/ Collaborate/ Empower- i.e. at which point was the community involved

Objective 2: Outcomes – short and long term

2.1 Monitoring indicators
2.2 Gender
2.3 Environment/ climate
2.4 Food security
2.5 Education
2.6 WASH
2.7 Mental health
2.8 Health and nutrition
2.9 Behavioral changes
2.10 Livelihood
2.11 Asset- based approach – i.e. what assets the community have and what resources they can utilise

Objective 3: Challenges

3.1 Cultural acceptance and community trust
3.2 Skepticism
3.3 Cultural sensitivities
3.4 Resources
3.5 Stigma
3.6 Contextual and cultural

Objective 4: Recommendations

4.1 Strengthening localization
4.2 Capacity building
4.3 Participatory assessment
4.4 Feedback mechanism
4.5 Local sourcing

4.6 Integrating existing capacity
4.7 Multisectoral partnership

Appendix G–Search Strategy

	Global Health	Scopus	Medline	Overton
Malnutrition	malnourish* OR undernutrition OR malnutrition OR "nutritional deficienc*" OR "nutrition* status" OR kwashiorkor OR marasmus OR wast* OR stunt* OR SAM OR MAM OR "protein energy" OR Malnutrition (DE) OR Nutritional State (DE)	malnourish* OR undernutrition OR malnutrition OR "nutritional deficienc*" OR "nutrition* status" OR kwashiorkor OR marasmus OR wast* OR stunt* OR SAM OR MAM OR "protein energy"	malnourish* OR undernutrition OR malnutrition OR "nutritional deficienc*" OR "nutrition* status" OR kwashiorkor OR marasmus OR wast* OR stunt* OR SAM OR MAM OR "protein energy" OR Malnutrition (MesH) OR Nutritional Status (MesH)	Malnourish OR undernutrition OR malnutrition OR nutritional deficiency" OR nutrition status OR kwashiorkor OR marasmus OR wasting OR stunting OR SAM OR MAM OR protein energy
AND				
Prevention	prevent* OR manage* OR control* OR reduc* OR protect*	prevent* OR manage* OR control* OR reduc* OR protect*	prevent* OR manage* OR control* OR reduc* OR protect*	prevent OR manage OR control OR reduce OR protect

	OR Prevention (DE)		OR Prevention (MesH)	
AND				
Community	“community involvement” OR “community action” OR “community participation” OR “community planning” OR “public participation” OR social OR local OR Community Involvement (DE) OR Community Action (DE) OR Community Programmes (DE) OR Community Participation (DE)	“community involvement” OR “community action” OR “community participation” OR “community planning” OR “public participation” OR social OR local	community N3 (program* OR initiative* OR intervention*) OR “community involvement” OR “community action” OR “community participation” OR “community planning” OR “public participation” OR social OR local OR Community Participation (MesH)	community involvement OR community action OR community participation OR community planning OR public participation OR social OR local

Appendix H-Literature Charting

		Paper
General	Title	
	Authors	
	Publication year	
	Type of paper	
	Location of paper	
Research objective	Main research question	
	Key objectives/aims	
Methods and approach	Methodology	
	Inclusion/exclusion criteria	
	Data sources	
	Sample sizes • Participants • Size • Context	
Objectives	1. To give an overview of community-led malnutrition prevention programs	
	2. To determine short term and long-term outcomes of community-led approaches in preventing malnutrition	
	3. To identify the challenges faced by current community-led programs	
	4. To provide recommendations that encourage community	

	involvement from the design stage in malnutrition prevention programs	
	5. To describe measures that enhance the sustainability and effectiveness of community participation from the design stage in malnutrition prevention programs	
Conclusions	Preventative/design focus?	
Any potential interviewees from the paper? Name and contact		

Appendix I - Analysis of all community malnutrition prevention programmes in our study

Programme Name & Location	Type	Implementer	Duration	Global Project? (Which)	Community Involved	Level of Engagement (IAP2)
Ying Yang Bao (YYB) + Child Health Counselling, Liangshan, China	Pre- and post-comparison study (implementation research)	Community Health Assistants (village-based, trained by medical staff)	~2 years (2018–2020)	No	Caregivers of children 6–23 months; village CHAs	**Involve**
SPIN (Strengthening Partnerships, Research and Innovations for improved Nutrition), Mpigi, Uganda	Non-randomised stepped wedge field trial	World Vision Uganda, 4 local institutions	3 years	No	Households with children 6–59 months in intervention villages	**Involve**
Growth Monitoring and Promotion (GMP), Loka Abaya, Ethiopia	Ongoing health extension package	Health Extension Workers, Health Development Army	Ongoing	Yes (Ethiopia Health Extension Program)	Mothers of children under 2, kebele community	**Consult**
IHAT-GUT Iron Supplementation Trial, Upper River Region, Gambia	Clinical trial	MRCG (Medical Research Council Gambia)	Not specified (single trial)	Yes (IHAT-GUT global research)	Caregivers/parents of anaemic children 6–35 months; local trial staff	**Consult**

Village Nutrition House Program, Aceh, Indonesia	Community-based implementation (since 2019)	Village head, community members, nutrition implementer, midwife, village organizations	Since 2019 (ongoing)	No	Families, village nutrition officers, local organizations	**Collaborate**
ERKADUTA (RT kawal baduta) Model, Bangka Belitung, Indonesia	Quasi-experiment (community-based assistance)	Trained cadres (community volunteers), local health posts	3 months (trial); ongoing as model	No	Mothers of children under 2, local cadres (community volunteers)	**Collaborate**
Community-Based Grain Bank, Amhara, Tigray, SNNPR, Oromia, Ethiopia	Community-based intervention, process evaluation	Women's groups, Health Extension Workers, NGOs	Not specified (multi-year, scaling up)	Yes (national IYCF/complementary feeding)	Mothers/caregivers of children 6–23 months, women's groups, local leaders	**Collaborate**
IMAM with Locally Produced RUTF, Vietnam	Implementation research, pilot	National Institute of Nutrition, local health system	Multi-year (pilot + scale-up)	Yes (IMAM)	Caregivers of children with SAM, local health staff	**Involve**
Rainbow Project SFPs, Ndola, Zambia	Community-based observational cohort	Rainbow Project, local NGOs, community volunteers	2015–2017 (evaluation)	No	Children 6–59 months, caregivers, community volunteers	**Collaborate**

National Vitamin A Supplementation (VAS), Nepal	National program, community-based delivery	Ministry of Health, Female Community Health Volunteers, NGOs, donors	25+ years (since 1993, nationwide since 2002)		Yes (linked to global VAS initiatives)	Preschool children 6–59 months, FCHVs, mothers' groups	**Collaborate**

Programme Name	**Location**	**Type**	**Implementer**	**Duration**	**Global Project?**	**Community Involved**	**IAP2 Engagement Level**
Boolo Xeex Xibon	Luga Region, Senegal	Community-led demonstration	Local communities + external facilitators	3-year pilot	No	Village members (health workers, women, local leaders)	**Empower**
Positive Deviance Hearth (PD Hearth)	Kenya (Nairobi), 40+ countries	Community-led nutrition intervention	Community health promoters, mothers, local NGOs	Ongoing (15+ years)	Yes (UNICEF/WHO-aligned, national strategies)	Mothers of malnourished children, local farmers, community volunteers	**Collaborate**
Community-Based Management of Acute Malnutrition (CMAM)	Ghana, India (50+ countries)	Government-led transition to community-based care	Ministry of Health, community health workers	Multi-year	Yes (aligned with global CMAM frameworks)	Caregivers, mothers, traditional healers, rehabilitated children as change agents	**Collaborate**
Rainbow Project SFPs	Zambia	Community-based observational cohort	Rainbow Project, local NGOs, community	2015–2017	No	Children 6–59 months, caregivers, community volunteers	**Collaborate**

			volunteers				
IMAM Programme	Zimbabwe	National health system integration	Ministry of Health, UNICEF, local health workers	Ongoing (since 2019)	Yes (UNICEF/WHO guidelines)	Caregivers, community health workers, district/provincial nutrition committees	**Collaborate**
Iranian CU5 Malnutrition Model	Iran (nationwide)	Policy-driven prevention model	Government, academia, local health systems	2020–present	Yes (aligned with UNICEF/WHO frameworks)	Families, healthcare providers, policymakers	**Consult**
Mother-to-Mother Support Groups	Bangladesh (rural)	Peer-led behavior change intervention	Non-governmental organizations, community healthcare professionals	Short-term (2018)	No	Mothers of children under 5, local healthcare workers	**Collaborate**
Family MUAC	Refugee contexts	Emergency-adaptive screening	NGOs, refugee community health workers	COVID-19 pandemic	Yes (global CMAM adaptations)	Caregivers, refugee mothers, skilled refugees (e.g., doctors)	**Involve**
Community Nutrition Shops	Zambia	Food security + nutrition intervention	Local government, women's groups	Not specified	No	Women's groups, caregivers, local leaders	**Collaborate**
School Feeding	Ghana	Multi-sectoral	Government,	Long-term	No	Schoolchildren	**Involve**

Programmes	intervention	schools, healthcare staff	(especially girls), teachers, parents

Appendix J – Researcher Profiles

Ananya Mathai
Ananya Mathai is pursuing a Master of Public Health with Humanitarian Health student at the Liverpool School of Tropical Medicine. She is an intercalating medical student at the University of Liverpool and has completed 3 years so far. Her academic interests are in the field of Humanitarian Health and Nutrition. She has family relatives that work in Nutrition programmes in India where she would like to work in the future. Previous research was in the socio-economic factors that influence vitreoretinal disease in the UK.

Bernard Akobulgo
Bernard is a public health professional from Ghana with over 10 years' experience at the Ghana Health Service, where he served as a community health nurse and later as a public health officer specializing in mental health. He holds an undergraduate degree from the College of Health, Yamfo, Ghana. Bernard is currently pursuing a Master of Public Health (Humanitarian Health) at the Liverpool School of Tropical Medicine, supported by the prestigious Chevening Scholarship of the UK government. His research interests include refugee health, mental health, health resilience during emergencies, maternal and child health, family planning, and community nutrition.

Brandon Carl Monika, MD
Brandon is an MSc student in Humanitarian Studies at the Liverpool School of Tropical Medicine. He brings over three years of clinical experience as a medical doctor working in conflict-affected communities in rural Cameroon. During this time, he was actively involved in managing both acute and chronic malnutrition among children and vulnerable populations, deepening his understanding of the structural and social determinants of nutrition-related health issues. This exposure sparked his strong interest in strengthening health systems in fragile and conflict-affected settings. As part of this commitment, Brandon is actively involved in public health research.

Dr Nervana Ibrahim
Nervana is currently pursuing an MSc in International Public Health at the Liverpool School of Tropical Medicine. She is a General Practitioner with over a decade of experience working in both clinical and community settings across the UK, South Africa, Cambodia, and Kenya. She has worked with international organisations including Voluntary Service Overseas (VSO) and the Maddox Jolie-Pitt Foundation, leading community-based projects focused on WASH, menstrual hygiene and youth empowerment. Her work has included

implementing programmes that promote youth employability and entrepreneurship in rural settings. Her academic and professional interests lie in health equity and participatory approaches to health promotion.

Dr. Noureldeen Goma:
Noureldeen is a dedicated medical doctor from Sudan with over a decade of clinical experience in public hospitals. He has committed his career to strengthening health systems, particularly in low- and middle-income countries (LMICs). His work focuses on research on health systems improvement, evidence-based resource allocation, and effective health service management. He is a recipient of the prestigious Chevening Scholarship and is currently pursuing a Master's degree in Public Health (Managing Health Services stream) at the Liverpool School of Tropical Medicine.