SYSTEMATIZATION OF THE NUTRITION PROGRAM

Cittadinanza ONLUS, Miti Alliance and Koinonia Community in conjunction with the Emilia-Romagna Region (RER)

Years 2020-2025

Disclaimer

This report reflects the experiences and findings of the systematization work carried out by Cittadinanza ONLUS, Miti Alliance, and Koinonia Community through nutrition-focused projects between 2020 and 2025. The views expressed do not necessarily represent those of the funders. This document is intended to be used for learning and advocacy initiatives and should not be reproduced without permission or proper citation.

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EXECUTIVE SUMMARY

This report presents the results of a systematization exercise undertaken to document and analyze the outcomes, good practices, and lessons learned from nutrition interventions targeting children with disabilities (CWDs). These interventions were carried out by Cittadinanza Onlus, Miti Alliance, and Koinonia Community between 2020 and 2025, through the SPARK 1, SPARK 2, POSSIBLE, PROTECT, and STEPS projects, co-funded by the Emilia-Romagna Region (RER). This systematization aims to consolidate learning, advocate for the health rights of children with disabilities, and inform future programming.

This report provides an overview of the socio-economic and cultural context of Kibera, Dagoretti South, and Kajiado North—areas where poverty, food insecurity, and inadequate health services pose significant challenges for children with disabilities. It describes the evolution of the nutrition model implemented over five years, including innovations such as the introduction of protein food packs, measuring mid-upper arm circumference (MUAC) to monitor levels of nutrition, integration of feeding aids, and improved caregiver training to support improved outcomes from home-based care and feeding practices.

Findings show measurable improvements in the nutritional status and overall well-being of children with disabilities. Data from weight and MUAC tracking, when used, indicate significant progress, while caregivers reported better feeding habits, enhanced child development (including mobility, strength, and cognitive milestones), and improved household nutrition practices.

The report also outlines persistent challenges, including economic barriers to accessing nutritious foods, cultural beliefs, and gaps in caregiver knowledge. Lessons learned emphasize the importance of community-based approaches, continuous caregiver support, and multi-stakeholder partnerships. The document concludes with recommendations for the sustainability of these interventions, the integration of informed nutrition with disability services, and advocacy for the rights of children with disabilities at local and national levels.

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GLOSSARY

Acute Malnutrition (Wasting) – A form of undernutrition characterized by low weight-for-height, often due to recent and severe weight loss resulting from insufficient food intake or disease.

BMI (Body Mass Index) – A measure of body fat calculated by dividing a person's weight by the square of their height (kg/m²). It is mainly used for individuals over 2 years old.

Cerebral Palsy (CP) – A group of disorders affecting movement, muscle tone, or posture resulting from damage to the developing brain.

Children with Disabilities (CWDs) – Children with physical, mental, intellectual, or sensory impairments that may limit their ability to fully participate in daily activities and society.

Chronic Malnutrition (Stunting) – Low height-for-age due to long-term insufficient nutrient intake and repeated infections, leading to impaired growth and development.

Complementary Feeding – The introduction of solid or semi-solid foods alongside breastfeeding at around 6 months of age.

Community Health Promoters (CHPs) – Frontline health workers trained and recognized by the Ministry of Health to provide basic health services, education, and referrals at the household and community level.

GAM (Global Acute Malnutrition) – The combined prevalence of moderate and severe acute malnutrition in a population.

Haemoglobin (HB) – A protein in red blood cells that carries oxygen throughout the body. Low haemoglobin levels (anaemia) indicate low iron levels or other health conditions.

Haem Iron – The type of iron found in animal-based foods (e.g., meat, fish) that is readily absorbed by the body.

Iron and Folic Acid Supplementation (IFAS) – Supplements provided to pregnant women to prevent anaemia and support foetal development.

Integrated Food Security Phase Classification (IPC) – A tool that classifies the severity of food insecurity and malnutrition using standardized thresholds.

Malnutrition – A health condition caused by an imbalance of nutrients (deficiency or excess) in the diet, leading to adverse effects on bodily functions and health.

Moderate Acute Malnutrition (MAM) – A moderate form of acute malnutrition characterized by mild to moderate wasting in children.

Maternal, Infant, and Young Child Nutrition (MIYCN) – A focus area promoting optimal nutrition for women during pregnancy and lactation and for children under 2 years of age.

Mid-Upper Arm Circumference (MUAC) – A quick and reliable measure for assessing acute malnutrition, especially in children aged 6 to 59 months.

Severe Acute Malnutrition (SAM) – A life-threatening form of malnutrition characterized by severe wasting (very low weight-for-height) or the presence of nutritional oedema.

SMART Survey (Standardized Monitoring and Assessment of Relief and Transitions) – A standardized methodology for assessing and monitoring the nutritional status of populations, often in humanitarian settings.

Stunting – See Chronic Malnutrition.

Underweight – A condition in which a child's weight is low for their age, reflecting acute or chronic undernutrition, or both.

Vitamin A Supplementation – Supplements given to children to reduce mortality and prevent blindness and other complications caused by vitamin A deficiency.

Women of Reproductive Age (WRA) – Women typically aged 15 to 49.

INTRODUCTION

Over the past years, Cittadinanza ONLUS, in partnership with Miti Alliance and Koinonia Community, has implemented a series of integrated initiatives aimed at enhancing the health, nutrition, and overall well-being of children with disabilities in Nairobi and Kajiado counties, within the framework of projects co-funded by the Emilia-Romagna Region (RER). These initiatives were developed and implemented in close collaboration with Paolo's Home Centres, a long-standing programme of Koinonia Community dedicated to the rehabilitation and social inclusion of children with disabilities.

As these interventions evolved over time, the need arose to go beyond individual project reporting and undertake a structured process of systematization. The purpose of this systematization is to capture, analyse, and consolidate the key learnings, good practices, and critical challenges that have characterised the nutrition programmes implemented between 2020 and 2025. By doing this, the systematization seeks to transform practical experience into shared knowledge that can be used for learning, advocacy, and strategic dialogue with stakeholders, institutional partners, and donors.

This document responds to that need by offering a reflective and analytical reconstruction of the nutrition interventions carried out within the SPARK 1, SPARK 2, POSSIBLE, PROTECT, and STEPS projects. Rather than presenting an evaluation of a single project, the systematization aims to provide a coherent overview of how the nutrition model has developed over time, how it has adapted to context-specific challenges, and what evidence has been generated regarding its impact on children with disabilities and their caregivers.

The document begins with a desk review that analyses the socio-economic, cultural, health, and nutrition context of the targeted areas. It offers a snapshot of the current state of nutrition and disability-related challenges. This contextual analysis provides the rationale and relevance of the interventions placing them within the larger framework of structural vulnerabilities.

The desk review is followed by a presentation of the projects analysed in the systematization, outlining their main objectives, target groups, and the evolution of the nutrition components across different implementation phases. The document then describes the methodology used to collect primary qualitative data through focus group discussions, pre-survey questionnaires, and consultations with caregivers and implementation staff.

The final sections are dedicated to the discussion of the findings, drawing connections between observed outcomes, caregiver practices, and programme design choices. The document concludes with a set of conclusions and recommendations intended to inform future programming, contribute to institutional learning, and support advocacy efforts for more inclusive and integrated nutrition and disability services.

Through this process, the systematization aims to strengthen collective knowledge, support evidence-based decision-making in development cooperation programs, and promote the sustainability and replicability of effective nutrition interventions for children with disabilities.

1. DESK REVIEW

This desk review presents a summary of the socio-economic, cultural, and nutritional context in both Nairobi and Kajiado counties, which form the backdrop of the nutrition interventions implemented through the SPARK 1, SPARK 2, POSSIBLE, PROTECT, and STEPS projects.

1.1 NAIROBI COUNTY

Nairobi County is Kenya's capital and largest urban centre. The county has experienced rapid population growth over the past 30-40 years and had a population of 4.39 million as of the 2019 census (Kenya National Bureau of Statistics, 2019). Notably, about 60% of Nairobi residents live in informal settlements that occupy only 5% of the county's land (UN-Habitat and Kenya Slum Upgrading Programme, 2007). Major informal settlements include Kibera, Mathare, Korogocho, Mukuru, and Kawangware. These areas are characterized by inadequate housing, poor sanitation, and limited access to electricity.

The precarious social and economic conditions in these settlements impact health, environmental quality, and economic development. Many residents rely on informal employment, leaving them vulnerable to price shocks, disease outbreaks, and political instability. This contributes to a high burden of disease, food insecurity, and malnutrition (UN-Habitat and Kenya Slum Upgrading Programme, 2007).

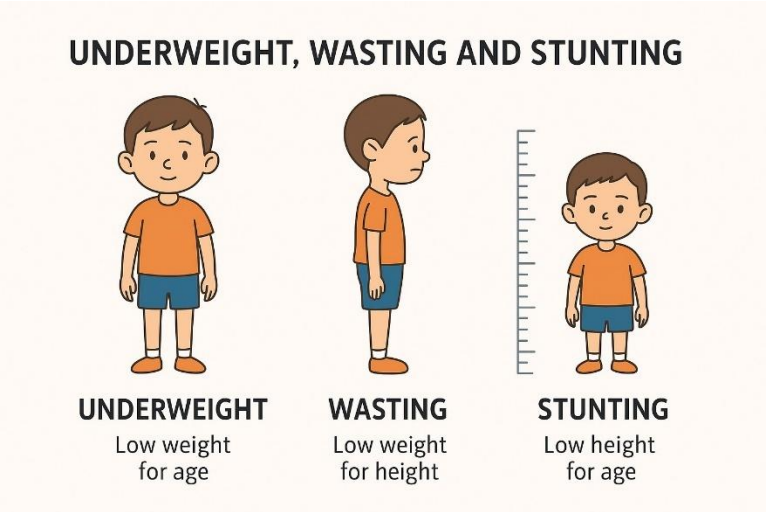
1.1.1 Health and Nutrition Challenges in Nairobi County

Poor living conditions predispose the urban poor to diseases such as tuberculosis, diarrhoea, malaria, and other waterborne infections, contributing to high malnutrition levels. Undernutrition and childhood illness have a cyclical relationship: disease suppresses appetite, leading to undernutrition, while nutrient deficiencies increase susceptibility to infections.

The Nairobi SMART survey (2020) reported a Global Acute Malnutrition (GAM) rate of 3.9% and a Severe Acute Malnutrition rate of 0.0%, classified as low according to WHO standards. However, malnutrition caseloads remain concerning.

- **Underweight:** A child whose weight is low for their age (World Health Organization, 2006). It can reflect both acute and chronic malnutrition. The prevalence of underweight children is 9.6%, with 2.5% classified as severely underweight. Boys are more often underweight (10.5%) compared to girls (8.6%).
- **Wasting (Acute Malnutrition):** Low weight-for-height due to rapid weight loss or failure to gain weight, often caused by food shortages or illness.
- **Stunting (Chronic Malnutrition):** Low height-for-age caused by prolonged inadequate nutrition and repeated infections, leading to long-term cognitive and physical impairments. Stunting prevalence is 24%, with 4.4% of children severely stunted.

Figure 1 Image displaying the difference between underweight, wasting, and stunting in children



1.1.2 Maternal, Infant & Young Child Nutrition (MIYCN)

The **first 1,000 days** of life—from conception to a child's second birthday—represent a critical window during which optimal nutrition and care lay the foundation for lifelong health, brain development, and immunity (UNICEF, 2024).

Anaemia in pregnancy contributes to poor infant nutrition by increasing the risk of foetal cognitive impairment, low birth weight, and heightened susceptibility to infections, all of which undermine infant nutritional status. The 2013 Kenya Micronutrient Survey found that 55.1% of pregnant women were anaemic (Ministry of Health, 2013). Contributing factors include poverty, malnutrition, teenage pregnancies, short birth intervals, and low maternal education levels (Haniff et al., 2007; Noronha et al., 2010).

Despite 88.4% of mothers reporting having taken iron-folic acid supplements during pregnancy, adherence was poor, with an average intake of just 9.9 days out of the recommended 290 days (Nairobi SMART Survey, 2020). Recent evidence confirms that folic acid deficiency is associated with neural tube defects and other congenital anomalies, but peri-conceptional supplementation significantly reduces these risks (Viswanathan et al., 2023).

The rates of children fed exclusively via breastfeeding in Nairobi's informal settlements were 55.8% in 2014 (Africa Population and Health Research Center, 2014). Suboptimal complementary feeding practices contribute to iron, zinc, calcium, and protein deficiencies. Many caregivers depend on unhygienic informal day care centres, further compromising child nutrition (APHR, 2014).

Vitamin A deficiency increases child mortality and exacerbates infections such as measles and diarrhoea. Only 46.4% of children aged 12–59 months in Nairobi received Vitamin A supplements twice in one year, far below the 80% national target (Nairobi SMART Survey, 2020).

Women of reproductive age (WRA) require optimal nutrition for maternal and infant health. The Nairobi SMART Survey (2020) found that only 2.7% consumed haem iron-rich foods, only 11.8% consumed protein-rich foods, and 72.3% of WRA consumed Vitamin A-rich foods for seven consecutive days. Similarly, the 2008–09 Kenya Demographic and Health Survey (KDHS, 2010) reported that only 41% of children aged 6–23 months met the minimum dietary diversity.

1.1.3 Nutrition Status by Sub-County

The focus of this systemization work will be on Kibra and Dagoretti sub-counties, where nutrition interventions have been carried out from 2020-2025. Malnutrition hotspots in Nairobi sub-counties have been identified, with the highest prevalence of wasting reported in Kamukunji (9.6%) and **Dagoretti** (9.2%) (Ministry of Health, 2020).

Dagoretti South Sub-county is a peri-urban area of Nairobi that includes both informal and formal settlements, where disparities in income, infrastructure, and access to essential health and nutrition services contribute to growing vulnerabilities among children, especially those with disabilities (Nairobi County Integrated Development Plan, 2018). In Dagoretti South, 24.5% of public primary school children (aged 4–11) were stunted, 14.9% were underweight, and 9.7% were experiencing wasting. Poor dietary diversity and frequent infections were noted as key contributors (Mwaniki et al., 2017).

Kibera (the informal settlement within Kibra sub-county) faces extreme poverty, overcrowding, and limited access to basic services. Most residents live on less than one dollar a day, creating severe risks for child health and nutrition, especially for children with disabilities (UN-Habitat, 2020). A study in Kibera found that among schoolchildren aged 5–14 years, 35% were stunted, 26% were underweight, and 14.8% were "thin"[1]. Girls and younger children (5–7 years) were the most affected (Tai, 2009).

1.1.4 Disability & Nutrition in Nairobi County

According to the 2019 Kenya Census, approximately 2.2% of Kenyans aged five years and above live with a disability (Kenya National Bureau of Statistics, 2019). While the census did not provide detailed age-disaggregated data for younger children, various estimates suggest that 1.3 to 1.8 million children under the age of 18 may be living with disabilities in Kenya (VSO, 2008). More recently, a UNICEF report indicates that approximately 1.9 million children aged 0–14 years are affected, underscoring a higher prevalence of disability in early childhood (UNICEF, 2021).

Recent studies on children with disabilities in Nairobi County reveal significant challenges in accessing education and support services. The Ministry of Labour (2021) reported that over half of children with disabilities aged 6–13 years are out of school, primarily due to severe disabilities affecting communication, cognition, self-care, and mobility. Despite the presence of special needs schools such as Jacaranda Special School and the Kenya Community Centre for Learning, only three out of 205 public schools in Nairobi have special needs facilities, limiting access to education and specialized support (Ministry of Labour, 2021; UNICEF, 2022).

[1] In nutrition assessments, *thinness* — a form of undernutrition among school-age children — is defined as a Body Mass Index (BMI) less than 2 standard deviations below the WHO Child Growth Standards median.
(https://media.globalnutritionreport.org/documents/Glossary_2021_Global_Nutrition_Report.pdf)

Nutrition is another critical challenge for children with disabilities, particularly in informal settlements where malnutrition rates are higher. These children are vulnerable to stunting, being underweight, and micronutrient deficiencies due to poor access to nutritious food and healthcare (Sarah et al., 2024). The same study that reported these findings on children with neurodevelopmental disorders also found that among those with cerebral palsy, 56% were stunted, 44% were experiencing wasting, and 55% were underweight (Sarah et al., 2024).

1.2 KAJIADO COUNTY

Kajiado County lies in southern Kenya, bordering Nairobi. The county has a population of 1,117,840 (KNBS, 2019). Agriculture and pastoralism support about 75% of residents and provide nearly 40% of local food needs (Community Assessment Report, 2023).

1.2.1 Health & Nutrition Challenges Kajiado County

Malnutrition remains a major public health issue in Kajiado. According to the Kenya Demographic and Health Survey (2022), stunting prevalence stands at 14%, underweight children at 10%, and wasting at 8% (Kenya Demographic and Health Survey, 2022). The Kenya Nutrition Situation Overview (2024) estimates that 2,783 children in Kajiado require treatment for Severe Acute Malnutrition (SAM), while 13,375 require care for Moderate Acute Malnutrition (MAM) (Kenya Nutrition Situation Overview, 2024).

The 2023 County SMART Survey reported a Global Acute Malnutrition (GAM) prevalence of 9.2% and SAM prevalence of 0.9%. Kajiado is classified as 'Stressed' (IPC Phase 2) for acute malnutrition (Integrated Food Security Phase Classification, 2023). GAM and SAM prevalence by MUAC were reported at 4.6% and 1.3%, respectively (County SMART Survey, 2023).

1.2.2 Maternal, Infant, and Young Child Nutrition (MIYCN)

According to the Kajiado MIYCN Knowledge, Attitudes, and Practices (KAP) Report, poor dietary intake in Kajiado is attributed to poverty, inadequate nutrition practices, and low physical activity. While 86.3% of respondents could recognize signs of malnutrition, over a third were unable to identify its causes. The most cited causes of malnutrition were food shortages (28%), poor caregiving practices (14.5%), and lack of knowledge (8.1%) (Kajiado MIYCN KAP Report, 2012).

Common first foods for infants in Kajiado County include porridge, animal milk, and mashed plantains, with low intake of vitamin- and mineral-rich foods. Prolonged breastfeeding (12–15 months) was reported in 75.4% of cases. Adherence to minimum dietary diversity among children aged 6–23 months was low: 13.5% consumed four or more out of seven food groups, and 19.0% consumed four or more out of eight food groups (Kajiado MIYCN KAP Report, 2012).

Vitamin A supplementation coverage was 66.4%, while deworming coverage was 47.4%. A total of 58.7% of children had experienced an illness in the two weeks prior to the survey, but only 50% of these sought medical care (Kajiado MIYCN KAP Report, 2012).

1.2.3 Kajiado North Sub-County

Kajiado North is one of five sub-counties in Kajiado, covering 111 square kilometres with a population of 306,596 and a density of 2,773 persons per square kilometre (Kenya National Bureau of Statistics, 2019). The sub-county consists of five wards: Ongata Rongai, Olkeri, Oloolua, Ngong, and Nkaimurunya. Due to its proximity to Nairobi, Kajiado North is highly urbanized, with growing slums and high poverty levels

that negatively impact nutrition (Long Rains Food and Nutrition Assessment Report, 2023). A total of 15,330 people in Kajiado North require food assistance, with Rongai Ward having the highest need (Long Rains Food and Nutrition Assessment Report, 2023).

1.2.4 Disability and Nutrition in Kajiado County

Persons with disabilities (PWDs) constitute 1.3% of Kajiado's population (Kenya National Bureau of Statistics, 2019). Kajiado County, with its vast rural geography and predominantly pastoralist communities, faces unique challenges in supporting children with disabilities. The Ministry of Labour (2021) highlights that rural counties like Kajiado are particularly affected by low enrolment rates of children with disabilities, with many schools lacking trained special needs educators and assistive devices.

Although the Kajiado County Disability Mainstreaming Bill (2023) mandates free rehabilitation and medical services for persons with disabilities — including the establishment of rehabilitation centres and mobile clinics — these interventions are yet to be fully realized at the grassroots level (Kajiado County Disability Mainstreaming Bill, 2023). For instance, while 150 children with cerebral palsy and autism are currently receiving nutritional supplements, this support remains limited and unevenly distributed (Kajiado County Integrated Development Plan, 2023–2027).

Nutritionally, children with disabilities in Kajiado are at a heightened risk due to overlapping vulnerabilities. High levels of food insecurity in arid and semi-arid areas contribute to chronic malnutrition among both the general population and children with disabilities, who may have additional feeding difficulties or health complications. Studies in similar contexts have shown increased rates of stunting, underweight children, and micronutrient deficiencies among children with physical or neurodevelopmental impairments, although Kajiado-specific data remain sparse (Sarah et al., 2024). These gaps point to an urgent need for integrated nutrition and disability support services, especially at the community and household levels.

2. REVIEW OF REPORTS FROM EXISTING PROJECTS

Since 2020, Cittadinanza Onlus, in collaboration with Miti Alliance and Koinonia Community, has been implementing nutrition interventions within the framework of five projects co-funded by the Emilia-Romagna Region (RER). These five projects aimed to guarantee, through an integrated programme, access to quality rehabilitation services for children with disabilities, while also creating the conditions for the economic and psychosocial empowerment of caregivers at Paolo's Home Centres.

2.1 About Paolo's Home Centres

Paolo's Home, is an initiative of the Koinonia community that has continuously increased its capability and capacity to rehabilitate children living with disabilities. The project was initiated in 2007 to offer rehabilitation services to children living with disabilities and has so far reached Dagoretti South (PH Kivuli), Kibra (PH Kibera) and Kajiado North Sub-Counties (PH Ngong).

Paolo's Home has grown over the years to a capacity of reaching beneficiaries with other services like:occupational therapy, speech therapy, **nutrition programmes**, daycare programmes, economic empowerment programmes, psychosocial support and counselling services, support for specialized medical attention, educational support, caregiver workshops, community sensitization and awareness campaigns.

The Nutrition Programme has been a key component of this integrated programme, and it was implemented by Miti Alliance. The main goal of the nutrition programme within these five projects has been to improve the health and nutritional status of children with disabilities in the three key areas.

Outlined below are the key outcomes and recommendations from the 5 nutrition programs that span from 2020-2025:

2.2 SPARK 1 - Nutrition Component Summary (2020–2021)

The nutrition component of Project SPARK 1, implemented by Miti Alliance, focused on promoting sustainable food production and equipping families at PH Kivuli Centre and PH Kibera with skills for basic kitchen gardening and at-home nutrition. The initiative aimed to improve food security and enhance the nutrition of children with disabilities (CWDs) through practical training and hands-on support. **Key Highlights:**

- **PH Kivuli:** 13 kitchen gardens established at caregivers' homes; 1 large kitchen garden established at the centre.
- **PH Kibera:** 1 kitchen garden established at caregiver's homes; 1 large kitchen garden established at Paolo's Home Kibera.
- **Trainings:** 3 kitchen gardening training sessions and 1 nutrition/food prep training session at each centre.
- **Approach:** Hands-on support for micro-farming (including vertical and wall gardens) and practical cooking demonstrations using garden produce.

Table 1 Outcomes vs Recommendations - SPARK 1

OUTCOMES	RECOMMENDATIONS
KITCHEN GARDENS	
Kitchen gardens improved household food security and access to nutritious vegetables for CWDs.	Encourage innovative small-space gardening options for homes with inadequate space or sunlight.
Homes in Kibera lacked adequate space and sunlight for farming.	Provide ongoing technical support for micro-farming.
Caregivers gained understanding of micro-farming methods suitable for limited spaces.	
NUTRITION TRAINING	
Improved caregiver knowledge of appropriate nutrition and food prep procedures for CWDs.	Offer follow-up training sessions, individualized nutrition counselling, and food support
Caregivers struggled with providing adequate nutrition due to financial constraints, feeding challenges, and low appetite in children.	
OTHER NOTES	
Caregivers reported emotional exhaustion and distress as well as limited knowledge regarding reproductive health.	Integrate caregiver mental health and reproductive health support in future programs.

2.3 SPARK 2 - Project Nutrition Component Summary (2021-2022)

Following the recommendations from SPARK 1, the SPARK 2 nutrition programme at PH Kivuli Centre and PH Kibera supported children with disabilities (CWDs) and their caregivers through a targeted nutrition intervention, training sessions and practical assistance, such as food packs and diapers. The targeted nutrition intervention included an initial nutritional assessment, two follow-up nutrition counselling sessions at six-week intervals, and the distribution of two food packs per child.

Key Highlights (both centres):

- 30 CWDs with malnutrition enrolled in the nutrition intervention programme (PH Kivuli: 22; PH Kibera: 8);
- Food packs (2 per child) distributed to all enrolled children. These food packs included nutritious, culturally relevant and accessible items such as porridge flour, beans, legumes, flour and cod-liver oil;
- 3 reproductive health training courses held at both centres;
- Nutrition & food prep training events conducted at both centres;
- 24 reusable sanitary towels distributed to caregivers (PH Kivuli: 12; PH Kibera: 12);
- 10 reusable diapers distributed (PH Kivuli).

Table 2 Outcomes vs Recommendations Project SPARK 2

OUTCOMES	RECOMMENDATIONS
TRAINING Nutrition and food-prep training provided relevant and necessary information. Reproductive health training covered pregnancy care, family planning, and reproductive health conditions. HIV was a serious issue among caregivers that was not comprehensively covered.	Continue to offer regular trainings in nutrition and cookery. Continue to offer reproductive health training and offer specific and in-depth training on HIV.
NUTRITION INTERVENTION Children with calcium deficiency/rickets improved the most through nutrition intervention. 70% of children in the nutrition intervention group gained weight. Noted higher levels of malnutrition in boys.	Sustain and expand nutrition interventions.

Feeding challenges in children with CP, 77% of underweight children had CP. Frequent illnesses: rotavirus, vomiting, diarrhoea, and pneumonia infections due to excessive drooling and low immunity. Severe nutritional challenges in PH Kivuli due to low income and lack of caregiver support. Older children (over 5 yrs) in PH Kivuli were more stunted than those in Kibera and some were left home alone all day. Many caregivers received unclear diagnoses regarding children's disabilities	Promote hygiene practices, provide washable, high-quality bibs to reduce exposure to cold and improve immunity through nutrition. If possible, offer daycare services to support working mothers, especially in PH Kivuli. Facilitate access to accurate and clear medical diagnoses.

2.4 POSSIBLE - Nutrition Component Summary (2022 - 2023)

Key Highlights (both centres):

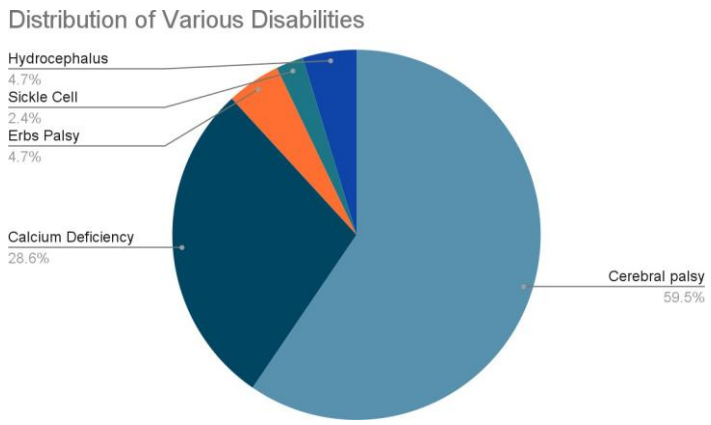
- 8 family health training sessions conducted at both centres covering nutrition, reproductive health, HIV, mental health, and family hygiene;
- 59 CWDs with malnutrition enrolled in the nutrition intervention programme (30 at PH Kivuli, 29 at PH Kibera);
- 4 food packs + cod liver oil distributed to each child in the nutrition programme;
- 20 reusable bibs distributed;
- 55 reusable diapers distributed.

Under Project POSSIBLE, the number of nutrition counselling sessions was increased to four per child, up from two in SPARK 2. This adjustment was made in recognition of the fact that, for many caregivers, nutrition knowledge was new and required sustained follow-up to reinforce learning and ensure a lasting impact.

The food packs distributed during this project primarily included various legumes, milk, peanut butter, and porridge flour. This composition was informed by observations from SPARK 2, where it was noted that the diets of CWDs were significantly lacking in protein. Cod liver oil was also introduced, as many children were found to have Vitamin D and calcium deficiencies, particularly those with cerebral palsy, whose diets were often extremely low in protein. This protein deficiency was largely attributed to feeding and chewing challenges, which limited their ability to consume common protein-rich foods.

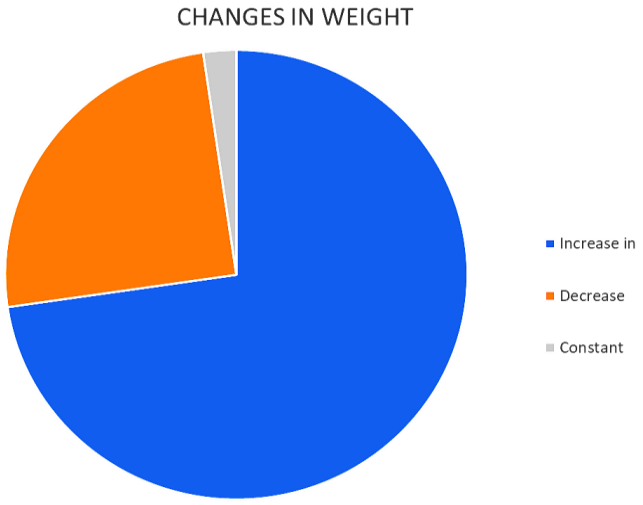
Children involved in the POSSIBLE nutrition intervention presented different types of disabilities, as reported in graph 1. As shown, children with cerebral palsy made up 56.8% followed by those with calcium deficiency at 27.3%, while other types are less frequent. Across all five programmes, the distribution of children with disabilities remains relatively consistent, with children diagnosed with cerebral palsy comprising the majority in each programme.

Graph 1 Project Possible - Distribution of various disabilities in the nutrition intervention group (n = 59)



The graph on the left shows the changes in weight from the start to the end of the nutrition intervention. As shown, almost 73% of the children reported an increase in weight following the intervention. Most reported decreases in weight were relatedto illness.

Graph 2: Project Possible - Changes in weight from start to end of intervention (n = 59)



73% increased, 2% constant, 25% decreased

Table 3: Outcomes vs Recommendations Project POSSIBLE

OUTCOMES	RECOMMENDATIONS
NUTRITION INTERVENTION 20% children started walking for the first time; 90% had an improved physical appearance. Children with calcium deficiency/rickets gained the most weight and showed the greatest improvement. Children with CP gained weight slowly due to feeding difficulties. High incidence of illness (rotavirus, pneumonia), hospital admission; 2 deaths. Financial difficulties of caregivers. Caregiver burnout and low motivation.	Sustain nutrition interventions. Provide feeding training and assistive feeding devices. Strengthen trainings regarding disease prevention, hygiene and sanitation practices. Provide caregivers with economic empowerment opportunities. Offer counselling, peer support groups, and training on mental health care.

2.5 PROTECT - Nutrition Component Summary (2023–2024)

At the start of the Project Protect, a new area of intervention was added: PH Ngong, Kajiado North Sub-county, Kajiado County. The project provided nutrition and family health support in the now 3 centres, improving food security and the well-being of children with disabilities (CWDs).

Key Highlights:

- 4 family health trainings (at PH Kivuli & PH Kibera) and one nutrition training conducted at PH Ngong;
- 93 CWDs with malnutrition enrolled in the nutrition intervention programme (41 PH Kivuli, 30 PH Kibera, 22 PH Ngong);
- 5 protein food packs + cod-liver oil distributed to each child in the nutrition program;
- 55 reusable diapers distributed (25 PH Kivuli, 20 PH Kibera, 10 PH Ngong).

Each child enrolled in the nutrition intervention underwent an initial nutritional assessment followed by four follow-up sessions at six-week intervals. They received a protein food pack at each session.

The graph below shows the distribution of various disabilities in the nutrition intervention group. As in Project Possible, cerebral palsy was the most common condition, followed by delayed developmental milestones. There was a decrease in the number of children with calcium deficiency compared to previous projects. Upon further investigation, it was noted that many caregivers who were yet to receive a specific diagnosis often reported the child's condition as "Delayed Milestone".

Graph 3 Project Protect - Distribution of various disabilities in the nutrition intervention group (n = 93)

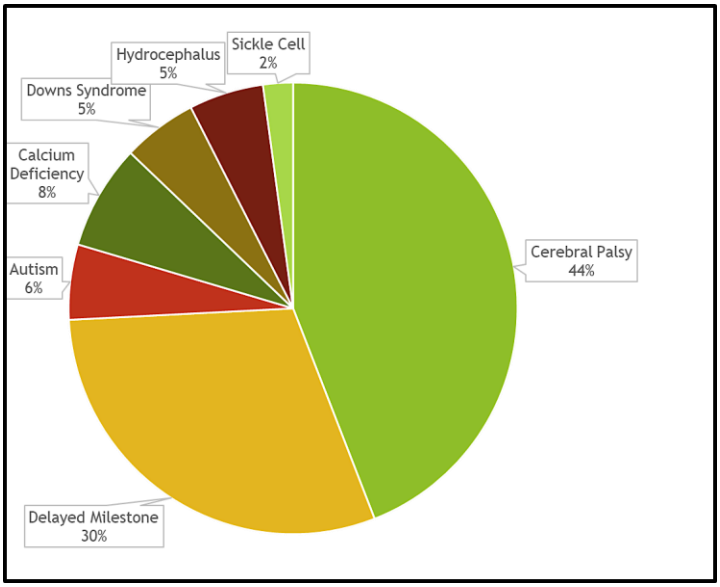


Table 4: Outcomes vs Recommendations - PROJECT PROTECT

OUTCOMES	RECOMMENDATIONS
NUTRITION INTERVENTION	
90% of children in the intervention gained weight. Many achieved new developmental milestones such as sitting, crawling, and walking.	Sustain nutrition interventions and consistent health monitoring.
PH Ngong had the highest malnutrition rates at the start of the project.	Prioritize PH Ngong for expanded nutrition support.
PH Kivuli showed the greatest improvement in malnutrition rates, largely attributed to caregivers' consistency.	
Deworming and vitamin A supplementation was inconsistent among children over three years of age.	
The rainy season worsened respiratory illnesses, and two children died due to pneumonia.	Ensure routine supplementation for all age groups.
Parental neglect linked to stress and poverty was observed. Many younger mothers of CWDs often need more parenting support to handle the complex emotional, nutritional, and developmental needs of their children.	Continue consistent training of parents on disease prevention and quick response to children's illness. Provide mental health support and economic empowerment for caregivers.
School-going CWDs' weight loss was attributed to lower food intake at school.	Implement peer support groups and education programmes for young mothers. Advocate for inclusive school feeding and caregiver-teacher collaboration.
TRAINING	
Training sessions continued to provide necessary and culturally relevant information on the care of CWDs to many new caregivers joining the programme.	Maintain regular training sessions, especially targeting new caregivers joining the programmes at PH centres.

2.6 STEPS - Nutrition Component Summary (2024–2025)

Key Highlights

Following recommendations from previous reports, Project STEPS included feeding aids to address some of feeding difficulties as well as help children transition through various foods. These included sippy cups, mortar and pestle for grinding hard foods, squeeze feeders for those with swallowing challenges, and plastic bibs.

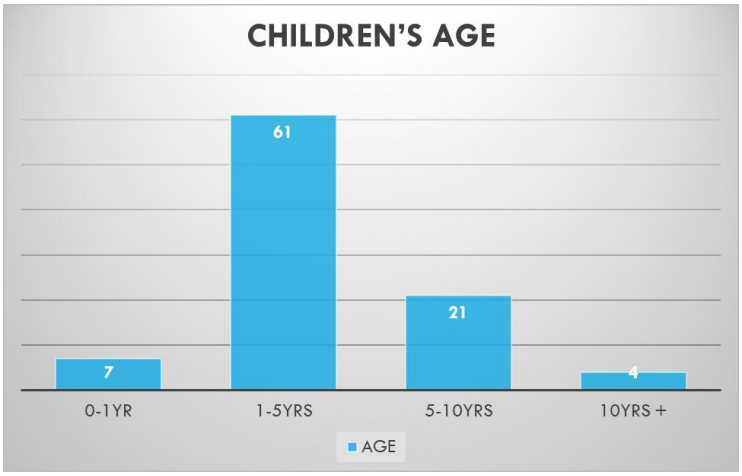
- 3 family health trainings conducted at each centre (PH Kivuli, PH Kibera, PH Ngong) prioritizing nutrition, reproductive health and mental health.
- 84 CWDs with malnutrition enrolled in the nutrition intervention programme (38 PH Kivuli, 22 PH Kibera, 24 PH Ngong).
- 5 protein food packs + cod-liver oil distributed to each child in the nutrition intervention program.
- Various feeding aids distributed to support children with special feeding needs.

Nutrition Intervention Highlights

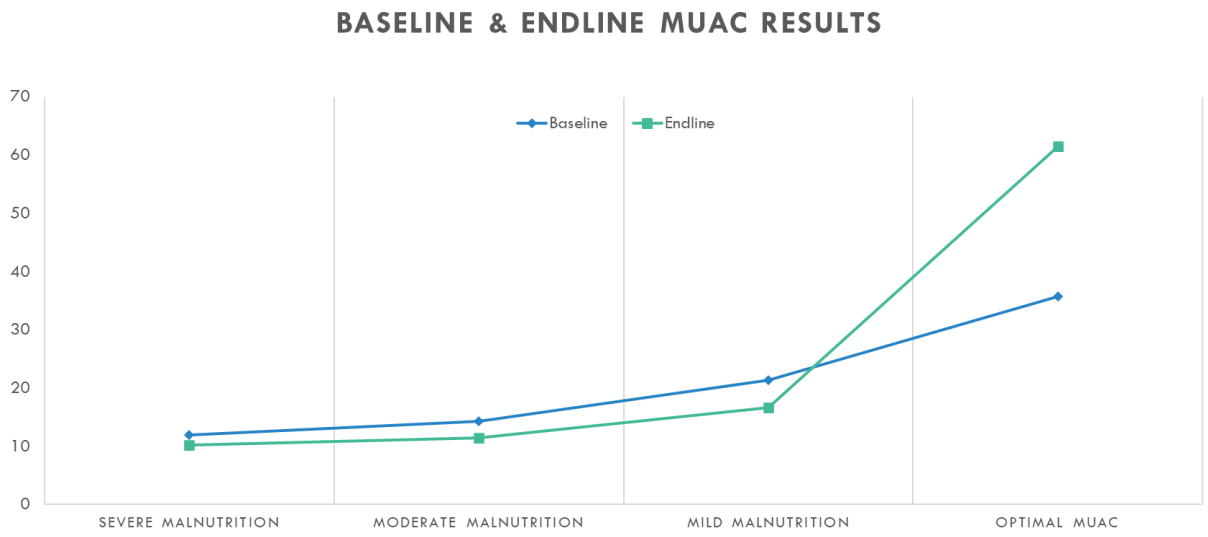
During Project STEPS, the nutritionists piloted the use of MUAC as the primary tool for assessing children's nutritional progress. Previously, they had relied solely on weight and BMI. However, BMI is only applicable for children aged two years and above, making it unsuitable given the wide age range of participants. Additionally, weight tracking alone does not fully capture a child's nutritional status, as a child may gain weight yet remain severely undernourished. The MUAC provided the most accurate reflection of a child's nutritional condition.

The graph below shows the age groups of children in the nutrition intervention. It reflected that the 1–5yrs was the most critical age range at risk of being underweight. Across all four programs, the age of CWDs included in the nutrition intervention remains relatively consistent, with children aged 1–5 comprising the majority in each programme.

Graph 4 Project STEPS - Age of children in nutrition intervention (n = 84)



Graph 5: Project STEPS - Baseline and endline MUAC results



The graph above illustrates the change in MUAC readings from the start to the end of Project STEPS. At the start of Project STEPS (baseline) only 35.7% of childrenhad an optimal MUAC reading, whereas at the end of the project 61.5% had an optimal MUAC. There was also a decrease in children with severe, moderate, and mild malnutrition. This was the result of improved feeding practices, increased access to protein-rich foods, and caregiver commitment.

It is also important to note that during Project STEPS, one of the earlier recommendations—to establish a daycare centre at PH Kivuli—was finally implemented. While it is still too early to assess its full impact, the facility is expected to contribute significantly to the improved health and nutritional status of children with disabilities and their families.

Table 5: Outcomes vs Recommendations - Project STEP

OUTCOMES	RECOMMENDATIONS
NUTRITION INTERVENTION	
60.3% of children in the programme gained weight and 95% of children showed an improved physical appearance.	
A decrease in children with severe, moderate, and mild malnutrition was observed at the end of the intervention.	Continue to encourage improved feeding practices, access to protein-rich foods, and encourage caregiver commitment.
An increase in children with an optimal MUAC, with 61.5% having an optimal MUAC at the end.	Continue nutrition-focused training sessions and targeted interventions.
Families continue to struggle with high food and medical costs.	
Caregivers (mostly single mothers or grandmothers) are burnt out.	Continue and expand economic empowerment initiatives, health trainings and medical support.
Some parents become aware of a child's disability very late in the child's life. Community health volunteers (CHVs) have been instrumental in early disability detection.	Strengthen caregiver support groups and mental health training sessions.
There are some cultural biases against specific nutrient-dense foods, such as eggs.	Enhance early intervention efforts through continued sensitization, continued engagment of CHVs, and upskilling. Train caregivers, staff, and CHVs with correct nutrition information to dispel myths.

2.7 IMPACT SUMMARY

Figure 2: Infographic displaying the projects' impact summary. Canva. (2025)

3. METHODOLOGY

This systematization of the nutrition programme employed both a quantitative and qualitative design using focus group discussions (FGDs) to gather in-depth insights on project outcomes, challenges, and recommendations from key stakeholders involved in the SPARK 1 & 2, POSSIBLE, PROTECT, and STEPS Projects. Some quantitative data were also collected through pre-survey questionnaires administered to caregivers and project staff.

3.1 Study Design

Focus group discussions were selected as the primary data collection method to facilitate open dialogue and collective reflection. This approach enabled participants to share experiences, highlight successes, and identify areas for improvement across the different projects.

3.2 Participants

A total of 47 caregivers (PH Kivuli: 15; PH Kibera: 16; PH Ngong: 16), including caregivers of children benefiting from the projects, with a particular focus on those whose children were involved in the nutrition interventions.

8 staff members, including therapists, social workers, counsellors, ECDE teachers, community health volunteers (CHVs), and project implementation staff who played key roles in delivering and supporting project activities.

3.3 Sampling

Participants were intentionally selected to capture a range of views and experiences. The selection process aimed to include caregivers of children with various disabilities and ages, as well as staff members involved in nutrition interventions.

3.4 Data Collection

Semi-structured discussion guides were developed for each participant group. These guides focused on eliciting participants' experiences, perceptions of project impact, the challenges faced, and recommendations for improvement. A pre-survey questionnaire was also completed by both caregivers and staff before participating in FGDs.

All FGDs were moderated by facilitators supported by note-takers. When consent was received from participants, sessions were also audio recorded. Discussions were conducted in English and Kiswahili based on the participants, and each session lasted between 60 and 90 minutes. FGDs were held in all three Paolo's Home Centres.

3.5 Ethical Considerations

Written consent was obtained from all participants prior to data collection. Participants were assured of confidentiality and anonymity, and participation was voluntary. No personal identifiers were included in the analysis or reporting.

4. FOCUS GROUP DISCUSSION - RESULTS & DATA ANALYSIS

4.1 Expectations & Initial Reactions

Caregiver Perspective

- Caregivers joined the programme in hopes of seeing improvements in children, notably weight gain, growth, and developmental progress. Many had limited knowledge on how to feed a child with a disability prior to the programme.

Caregivers showed excitement and relief upon receiving protein food packages and cod liver oil.Staff Perspective

- Staff saw the nutrition intervention as necessary and timely and expected it would fill gaps in holistic care but anticipated challenges in adoption by caregivers and families due to financial and social factors.

4.2 Impact on Child Health & Development

Caregiver Perspective

- Significant weight gain was observed. Many milestones achieved: walking, standing, speech development, and improved feeding
- Health improvements: reduced infections, stronger bones, and visible improvements in physical appearance, such as hair and skin.

Staff Perspective

- All staff members rated the effectiveness of the nutrition intervention as 'effective' or 'very effective' (scores of 4 or 5).
- 100% of the staff reported significant improvement in the nutritional status of CWDs who participated in the nutrition intervention.
- Combined nutrition and therapy contributed to milestone achievement. Most staff members reported significant improvement (a score of 5) in physical recovery, energy levels, muscle strength (as noted by physiotherapists), cognitive or speech gains, cognitive performance, reduced absenteeism (as reported by ECDE teachers) and overall well-being (as observed by social workers).

4.3 Feeding Practices & Home Implementation

Caregiver Perspective

- There was a notable shift toward more balanced diets, including protein-rich foods and indigenous vegetables, especially plant proteins that are more readily accessible. Caregivers prioritized legumes, vegetables, and animal protein when shopping.
- There was a reduced reliance on low-nutrient foods (e.g., white porridge, mandazi, Weetabix, instant noodles/indomie) and therefore such items were purchased less frequently. The most commonly purchased foods after the nutrition intervention were milk, legumes, and grains.
- 38% of caregivers reported feeding difficulties, specifically long feeding times and issues with chewing and swallowing. There was a noted progression from blended to mashed/solid foods as difficulties improved.
- In response to the use of cod liver oil, caregivers reported weight gain, stronger bones, fewer respiratory illnesses, increased appetite, and increased energy.

Staff Perspective

- Staff members noted that financial constraints are the biggest hindrance for families in adopting the nutrition guidelines provided. Many noted that some of the families have implemented the recommended nutrition changes but not consistently, mainly due to financial constraints.
- One staff member noted that there is limited knowledge among caregivers on how to prepare healthy meals.

4.4 Caregiver Well Being

Caregiver Perspective

- They expressed stress, exhaustion, and sometimes frustration regarding their efforts to meet dietary needs within tight financial limits.
- Improved self-esteem as they could better provide for their children, and they saw their children gain weight.
- It was noted that 34% of mothers experienced prolonged labour leading to cerebral palsy (CP) and another 32% had other pregnancy and delivery complications including: jaundice, placenta previa, pre-eclampsia, anaemia and postpartum hemorrhage.

Staff Perspective

- Staff observed changes in caregivers as children improved, seeing caregivers become more hopeful and confident, with improved mental well-being.

4.5 Social & Economic Factors

Caregiver Perspective

- Low household incomes, food insecurity, and minimal external support affected their ability to sustain recommended diets.
- 36% of the caregivers were casual labourers and 42.5% own small businesses. 91% of all caregivers had a household income between 5,000–10,000KSh per month for an average household size of 5 or more.
- 47% of caregivers attended up to primary school and 38% up to secondary school. In Ngong none of the caregivers had gone beyond primary school, while in Dagoretti most had attended secondary school.
- 70% of caregivers reported that they had no daily access to diverse foods (proteins, fruits and vegetables)

Staff Perspective

- Staff members noted cultural beliefs around certain foods causing a barrier to adherence to nutrition guidelines. There was resistance to change by some caregivers.
- Consistently identified financial constraints and lack of access to nutritious food as the top challenges for families. They noted that the protein food package was crucial in the success of the program.

4.6 Effect on Professional Practice & Collaboration (Addressed only to staff)

Staff Perspective

- Staff members reported giving more nutrition advice, although confidence levels varied, with 50% being very confident.
- Some (25%) felt undertrained in integrating nutrition into their roles; many requested further training and resources.
- Multidisciplinary collaboration could be improved among the team of nutritionists, therapists, counsellors, and social workers.

4.7 Challenges & Areas for Improvement

Caregiver Perspective

- Financial limitations affected the ability to sustain the recommended diet.
- Feeding during time of illness remained challenging.
- Community stigma affected some caregivers' confidence in feeding in public

Staff Perspective

- Shortening the intervention length to allow a larger number of CWDs to benefit was recommended.
- Some caregivers needed more follow-up on feeding techniques.

4.8 Sustainability & Recommendations

Caregiver Suggestions

- Continued support through daycare and nutrition training.
- Affordable protein options or ongoing food packages.
- Economic empowerment programs, e.g., small business or income-generating initiatives.

Staff Suggestions

- All children with calcium deficiency should begin nutritional therapy before physiotherapy or occupational therapy.
- Suggest affordable nutritious food options for caregivers.
- Offer more education for caregivers and community members (cooking demos, meal planning). Involve more fathers and Community Health Volunteers (CHVs) in education/training sessions.
- Encourage early nutrition intervention (starting in infancy).
- Continue or expand food supplementation via food packs.
- Continue providing training on reproductive health and pregnancy care.

Table 6: Summary of Results from Data Analysis

Theme	Caregiver Perspective	Staff Perspective
1. Expectations & Initial Reactions	Hopeful for weight gain and developmental progress; welcomed food packages and cod liver oil.	Saw intervention as timely and necessary; expected social and financial adoption barriers.
2. Impact on Health & Development	Reported weight gain, milestone achievements (e.g., walking, speech), fewer infections, stronger bones, and improved appearance.	Rated the intervention as highly effective; noted improvements in nutrition, physical recovery, cognitive development, and well-being.
3. Feeding Practices & Implementation	Shifted to more balanced diets (legumes, vegetables, animal proteins); reduced low-nutrient food use. 38% reported feeding difficulties, but progression was observed.	Financial barriers noted as the main challenge to consistent implementation; some caregivers lacked knowledge on healthy meal preparation.
4. Caregiver Well-being	Reported stress and frustration due to financial limits; self-esteem improved as children gained weight. History of complicated pregnancies was noted.	Observed increased hope and confidence among caregivers as children's health improved.
5. Social & Economic Factors	Low incomes (5,000–10,000KSh/month); food insecurity; low education levels; limited dietary diversity access.	Financial barriers and cultural beliefs identified as key challenges; food packages seen as essential to programme success.
6. Professional Practice & Collaboration	(Not applicable)	50% were confident giving nutritional advice; 25% felt under-trained; requested more training and improved multidisciplinary teamwork.
7. Challenges & Areas for Improvement	Feeding challenges during illness; stigma around public feeding; financial limitations.	Suggested shortening intervention periods for wider reach; highlighted need for caregiver follow-up.
8. Sustainability & Recommendations	Requested ongoing daycare, training, affordable proteins, and income-generating activities.	Recommended food supplementation, early intervention, reproductive health training, male parent involvement, and affordable nutrition education through demos and CHVs.

5. DISCUSSION

The evaluation of the nutrition intervention for children with disabilities across the three intervention areas highlights both significant achievements and critical areas for sustained intervention. The programme has clearly demonstrated that integrated nutrition support, when combined with caregiver education and therapeutic services, can contribute meaningfully to improvements in child health and developmental outcomes.

5.1 Impact on child health and development

Caregivers consistently reported significant weight increases, stronger immunity, improved mobility, better speech development, stronger bones, and healthier skin and hair. The positive response to protein-rich diets, cod liver oil, and diversified feeding practices illustrates the importance of addressing specific nutritional deficits common among children with disabilities. These improvements suggest that the program's design—which pairs direct food support (particularly protein-rich foods) with individualized nutrition counselling—is effective in overcoming both knowledge gaps and immediate nutritional deficiencies.

5.2 Transformation of caregiver practices

A notable outcome of the programme was the shift in caregivers' feeding habits and shopping behaviours. Many caregivers described increased inclusion of legumes, indigenous vegetables, and animal protein in the diets of children, as well as that of the entire family. There was also a clear move away from reliance on processed or less nutritious foods (e.g., mandazi, Weetabix, Indomie/instant noodles). This demonstrates that the program successfully equipped caregivers with practical skills and knowledge that extended beyond the direct beneficiaries to entire households. However, while knowledge improved, financial constraints continued to limit consistent access to these foods, particularly animal proteins and legumes, highlighting the intersection of poverty and nutrition insecurity.

5.3 Caregiver well-being and psychosocial outcomes

The data reflected a positive impact on caregivers' mental well-being. Several caregivers reported reduced feeding-related stress, more confidence in managing their children's feeding challenges, and a sense of belonging through participation in the program. The sychosocial support through individualized nutrition counselling provided encouragement, which is essential given the complex demands of raising a child with disabilities. This aligns with broader evidence that caregivers' mental health directly influences child nutrition and care practices.

5.4 Challenges and risks

Despite the successes, the findings highlight several persistent challenges. Financial hardship remains a major barrier to sustaining improved diets, with many caregivers unable to consistently afford adequate protein intake. Feeding challenges during periods of child illness and among children with complex feeding difficulties (e.g., difficulty chewing, swallowing) remain a source of stress, often requiring specialized support beyond the scope of the current program. The reliance on external food packages raises

concerns about the sustainability of these gains once external support is withdrawn. Few alternative nutrition support systems exist locally and hospital-based interventions were reported as inadequate or lacking.

5.5 Programme sustainability

The evaluation underscores the need for long-term integrated approaches that address both immediate nutritional needs and the underlying economic and structural barriers faced by families. There is a clear opportunity to strengthen linkages between nutrition programs, economic empowerment, and access to health and disability services. Without such integration, the risk of regression in child health and caregiver well-being following programme exit remains significant.

In summary, while the nutrition programme has had a meaningful and positive impact on participating families, its long-term effectiveness depends on building resilient families and, in turn, communities that can sustain and scale these gains beyond the life of the project.

6. CONCLUSION

This systematization work confirms that the nutrition programme has significantly contributed to improving the health, nutritional status, and development of children with disabilities across Dagoretti north, Kibra, and Kajiado North sub-counties. Through a combination of individualized nutrition counselling, food support, caregiver training, and integration with therapeutic services, the programme addressed both immediate and underlying causes of undernutrition and developmental delays.

Caregivers demonstrated increased knowledge and confidence in providing balanced diets, with observable changes in shopping and feeding practices that benefited the whole family. The programme also had important psychosocial benefits, including reduced caregiver stress and the strengthening of community support networks.

Staff at centres gained greater confidence in the value of integrating nutrition interventions alongside other therapies for children with disabilities. The programme also underscored the importance of a multidisciplinary approach to ensure a lasting and meaningful impact for children with disabilities.

However, the programme's sustainability remains a key concern. Many families continue to face financial challenges that limit consistent access to nutritious foods. The heavy reliance on external food packages highlights the need for stronger systems and linkages that can sustain and scale these gains in the long term.

7. RECOMMENDATIONS

Strengthen partnerships with economic empowerment programs

- Link families with economic empowerment opportunities to enhance financial capacity for sustained nutritious food purchases.
- Continue to advocate for the inclusion of children with disabilities in targeted social protection and nutrition initiatives at county and national levels.

Enhance local availability and affordability of protein foods

- Support community-level initiatives (e.g., kitchen gardens, small-scale poultry or fish farming) to reduce dependence on purchased protein foods.
- Promote bulk buying or cooperative models for legumes and other key staples to lower household costs.

Expand caregiver training and peer support

- Continue and deepen caregiver education on affordable and locally available ingredients for a balanced diet, practical feeding techniques, and coping strategies for feeding challenges.
- Continue training families on health-related topics, including reproductive health, hygiene and sanitation, and other necessary topics.
- Formalize peer support groups to sustain emotional support and shared learning beyond the programme's end.

Improve linkages with the health system

- Continue integrating nutrition into multidisciplinary care teams, including physiotherapy, speech therapy, and counselling, as this has shown benefits for recovery and developmental milestones.
- Engage local health facilities to adopt and extend nutrition support for children with disabilities, including clearer protocols on disability-sensitive nutrition counselling.
- Explore collaborations to provide specialized feeding therapy for children with complex feeding difficulties.

Plan for sustainability

- Gradually transition families from food aid to self-reliant practices, accompanied by continued mentorship and support.
- Explore public-private partnerships to support food supplies, caregiver training, and therapeutic services for children with disabilities.

Continue monitoring and evaluation

- Work with CHPs (Community Health Promoters) to track child progress, caregiver practices, and household food security beyond the programme's support.
- Use the information gathered from this evaluation to inform policy advocacy for inclusive nutrition programming at county and national levels.

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9. APPENDICES

9.1 APPENDIX 1: FGD QUESTIONS FOR CAREGIVERS

Pre-Survey Questions

A. Caregiver Demographics

1. Are you the PRIMARY caregiver of the child? **[ ] Yes [ ] No.** (Relation to child: _____)
2. Interviewee name (Optional):_____
3. Area of Residence: **[ ] Kibera [ ] Dagoretti [ ] Ngong**
4. Age of mother: **[ ] <20 [ ] 21-30 [ ] 31-40 [ ] 41+**
5. Level of education: **[ ] No formal education [ ] Primary [ ] Secondary [ ] College/University**
6. Marital status: **[ ] Married [ ] Single [ ] Divorced/Separated [ ] Widowed**
7. Number of children: **[ ] 1 [ ] 2-3 [ ] 4-5 [ ] 6+**
8. Is your child with a disability older than 7 years of age? **[ ] Yes [ ] No**
9. Do you have other children with disabilities? **[ ] Yes [ ] No**

B. Child's Information

9. Child's Name:_____ 10. Child's age: _____**years old** 11. Child's Sex: **[ ] Male [ ] Female**

12. Type of disability (tick all that apply):

- Cerebral Palsy
- Calcium Deficiency/Rickets
- Down Syndrome
- Delayed Milestone
- Autism
- Sickle Cell
- Other (Specify: _____)

13. Was your child born preterm? **[ ] Yes [ ] No**

14. Did you encounter challenges during delivery and/or during the first 6 months of life? **[ ] Yes [ ] No.** (Specify:

_____ _____ _____ _____ _____ _____ _____ _____ _____ _____

_____)

15. Did you face any health issues or nutrition issues when pregnant? **[ ] Yes [ ] No**

(Specify:_____

15. Was your child part of a multiple birth (twins, triplets)? **[ ] Yes [ ] No**

16. Does your child attend any of the following?

- **[ ] Physiotherapy**
- **[ ] Occupational Therapy**
- **[ ] Speech Therapy**
- **[ ] Daycare**
- **[ ] School**

C. Economic & Social Factors

17. What is your primary source of income?

- No income
- Casual labour
- Small business (Specify: _____)
- Formal employment
- Farming

18. Estimated monthly household income:

- <5,000 KSh
- 5,000 - 10,000 KSh
- 10,000 - 20,000 KSh
- 20,000+ KSh

19. Number of people in the household:_____

20. Do you receive any financial or food support? **[ ] Yes [ ] No**

21. Do you have reliable access to diverse foods on a daily basis (proteins, fruits, vegetables)? **[ ] Yes [ ] No**

22. Name 3 foods you consider most important for your child:_____

23. Do you face challenges when feeding your child (e.g., swallowing, chewing, digestion issues)? **[ ] Yes [ ] No**

(Specify: _____)

24. How many times have you been enrolled in the nutrition programme? _____**cp**

9.2 APPENDIX 2: FOCUS GROUP DISCUSSION QUESTIONS

Opening Question

- How did you feel when you first joined the nutrition programme? When did you join? What were your expectations?

Impact of the Nutrition Programme on the Child

- What changes did you notice in your child's **weight, energy levels, or general health** after participating in the programme?
- How did your child respond to the **protein food pack and cod liver oil**? Did you notice any improvements or challenges?
- After receiving the food packages, were you able to continue to purchase the same foods for the child, as recommended by the nutritionist? What foods did you begin or stop purchasing?
- Did the **nutritional counselling sessions** change how you feed your child? What was the most important strategy or tool that you learned?

Child-specific Factors Affecting Progress

- Did your child's **disability type** influence how they benefited from the programme? (e.g., issues swallowing, digestion problems)
- Was access to **education or therapy** a factor in their progress?
- What feeding challenges do you still experience? (e.g., difficulties chewing/swallowing, food preferences)

Impact on the Caregiver

- Have you experienced **stress, exhaustion, or mental strain** when feeding your child? How do you cope?
- If you have **an older child (7+ years old) with a severe disability**, has the long-term strain affected how you feed this child?
- For those who had **preterm babies or difficult deliveries**, did this affect your child's feeding, growth, and development? How?
- For mothers with **twins or multiples**, how did this affect their nutrition and health?

Social & Economic Impact

- How has your **financial situation** affected your ability to feed your child?
- Has **economic empowerment** (such as income-generating activities) made a difference in your child's health?
- In your experience, does starting **nutrition support earlier (infancy) vs. later (after a few years)** impact a child's improvement?
- Are you aware of any nutrition and health services available in your community for children with disabilities?

Conclusion

- What was the most valuable part of the programme for you?
- If you had one message for organizations working on nutrition for children with disabilities, what would it be?

9.3 APPENDIX 3: FDG QUESTION FOR IMPLEMENTATION STAFF

1. **Pre-survey Questions**

Name:_____

Professional Role:_____

Length of time working with CWDs:_____

2. **On a scale of 1 to 5, how would you rate the overall effectiveness of the nutrition intervention in improving health outcomes for the children you work with?**
   (1 = Not effective, 5 = Very effective)

1. Since the start of the intervention, have you noticed an improvement in the nutritional status of the individuals participating in the programme?

- Yes, significant improvement
- Yes, slight improvement
- No change
- No, it has worsened
- Not sure

3. **In your experience, how well have families been able to implement the recommended nutrition changes upon joining the programme?**
   - Most families have successfully implemented the changes
   - Some families have implemented the changes, but not consistently
   - Few families have implemented the changes
   - Very few or no families have implemented the changes
4. **In your opinion, what is the biggest challenge families face in adopting the proposed nutrition guidelines? (Select one)**
   - Lack of access to nutritious food
   - Financial constraints
   - Limited knowledge on how to prepare healthy meals
   - Cultural beliefs and food preferences
   - Resistance to change
   - Other (please specify) _____

5. **Since the nutrition intervention began, have you noticed any improvements in how the intervention beneficiaries respond to therapy (physiotherapy, speech therapy, etc.)? (Select one)**
    - Yes, a significant improvement
    - Yes, a slight improvement
    - No noticeable change
    - No, response to therapy has worsened
    - Not sure
6. **How confident do you feel about discussing basic nutrition advice with families as part of your role?**
    (1 = Not confident at all, 5 = Very confident)
7. **What additional support or resources would help improve the success of this nutrition intervention? (Select all that apply)**
    - More nutrition education/training for caregivers
    - Access to more affordable nutritious food options
    - Cooking demonstrations or meal planning sessions
    - More community engagement and peer support groups
    - Other (please specify) _____

9.4 APPENDIX 4: IMPLEMENTATION STAFF FOCUS GROUP DISCUSSION

1. **Opening Questions**

- What was your initial reaction or expectation when the nutrition intervention was introduced? Did you find it necessary?

2. **Observed Impact on Beneficiaries**

- Have you seen any noticeable improvements in the health and well-being of beneficiaries receiving nutrition support? If so, what changes stand out?
- In your specific field (physiotherapy/speech therapy/social work), have you noticed any changes in patient progress that could be linked to improved nutrition?
    - For physiotherapists: Have you seen any improvements in physical recovery, energy levels, or muscle strength?
    - or speech therapists: Have you observed any cognitive or speech-related improvements that may be linked to better nutrition?
    - For social workers: Have families expressed any feedback about their children's overall well-being since the intervention?
    - For Counsellors: Have caregivers expressed any emotional relief, stress reduction, or additional burden as a result of the intervention?

3. **Effect on Work & Multidisciplinary Collaboration**

- Has the nutrition intervention influenced how you approach your work with clients? Do you find yourself giving any nutritional advice?
- Do you feel you have enough information and training to integrate nutrition into your practice effectively? If not, what support would help?
- Are you aware of any other nutrition services available to the beneficiaries in the community?

4. **Challenges & Areas for Improvement**

- Are there any clients who seem to struggle with following the nutrition guidelines? If so, why do you think that is?
- Do you think the intervention is accessible and practical for all clients, or are there barriers that need to be addressed (e.g., affordability, cultural preferences, family support)?
- What additional support or resources do you think could enhance the impact of the intervention?

5. **Long-Term Sustainability & Future Recommendations**

- In your opinion, what would make this nutrition intervention more effective in the long run?
- Would you recommend any changes to how nutritional education or support is delivered to clients and their families?
- What's one thing you think should continue or be expanded based on the impact you've observed so far?

6. **AOB's**

9.5 APPENDIX 3: CONSENT FORMS FOR FOCUS GROUP DISCUSSION

Dear Participant,

We invite you to take part in a focus group discussion aimed at understanding the impact of a nutrition programme on children with disabilities. The information gathered will help us improve nutrition interventions and better support caregivers like you.

Purpose of the Discussion:

The discussion will focus on your experiences with the nutrition programme, including its impact on your child's health and well-being. We will also explore factors that may have influenced your child's progress, such as feeding challenges, access to education, and social or economic factors.

What your participation involves:

- The discussion will last approximately **1.5 hours**.
- Your participation is **voluntary**, and you may choose to withdraw at any time without consequences.
- The discussion will be recorded (with your permission) for accurate notetaking.
- Your responses will remain **confidential**, and no personal information will be shared publicly.

Potential risks and benefits:

- There are no direct risks, but some topics may be sensitive. If you feel uncomfortable, you may choose not to answer certain questions.
- Your participation will help improve future nutrition programmes for children with disabilities.

Confidentiality:

- Your responses will be anonymous in any reports or publications.
- Data will be securely stored and only used for research and programme improvement purposes.

Consent Statement:

I have read and understood the information provided above. I voluntarily agree to participate in this focus group discussion.

Participant's Name: _____ **Facilitator's Name:**

_____

Signature: _____ **Signature:** _____

Date: _____ **Date:** _____

Thank you for your valuable contribution!