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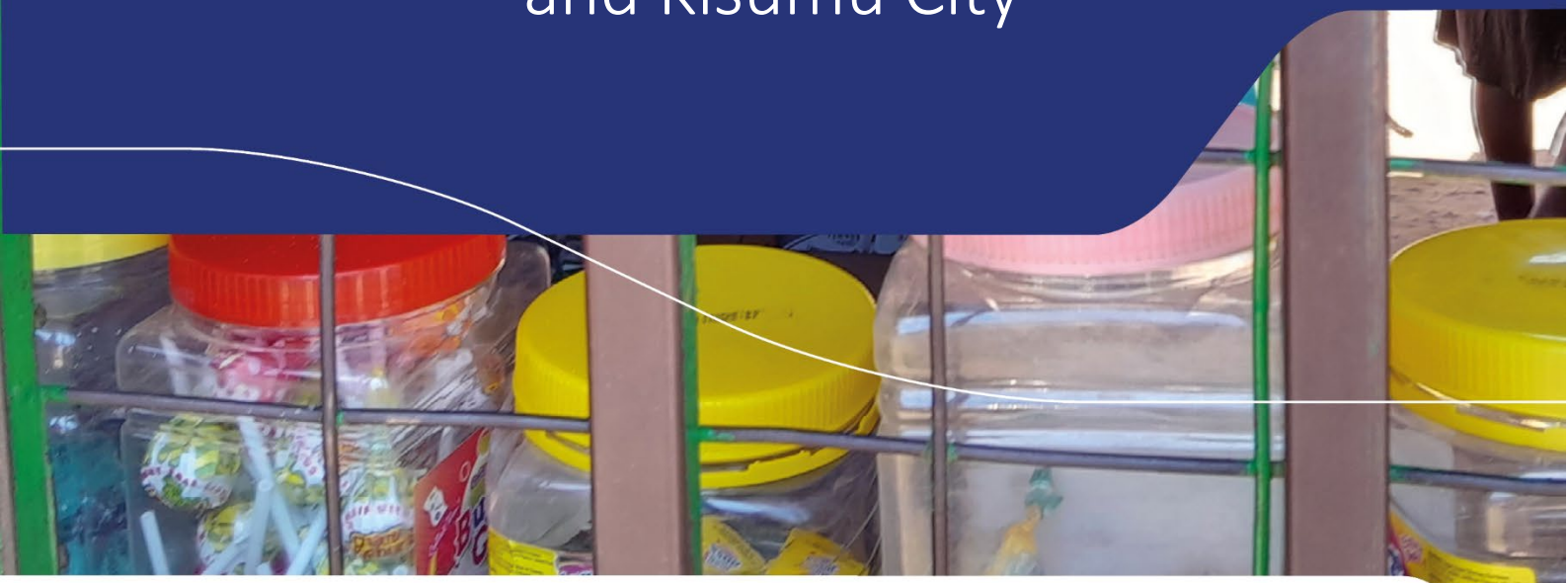
Policy Briefing

Improving diets of young children in the context of household nutrition in urban Kenya

Insights from Busia Town and Kisumu City



Dalberg Research

Save the Children

UNIVERSITY OF NAIROBI

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Summary

Despite strong policy commitments, less than one third of children aged 6–23 months receive nutritionally adequate diets in Kenya. Research in Busia and Kisumu reveals that household **food choices are influenced by affordability**, **convenience** and **marketing**. Most households buy unbranded carbohydrate staples daily from local outlets based on available funds. **Families aspire to feed young children** dairy, flesh foods and **instant cereals** (advertised on TV and radio) but face barriers such as high costs and limited availability. However, fortified foods for young children **are disproportionately expensive**, and the **suitability of common** family **breakfast cereals for children** 6–23 months **is unclear**. There are also nutrient **labelling inconsistencies** for packaged baby porridges and fortified flours. **Urgent action** is needed **to improve access to affordable nutritious** family foods and **age-appropriate instant and fortified foods** for young children alongside **trusted nutrition information.**

Context and methods

Nutrient deficiencies in early life are linked to long-term adverse health consequences. Yet only 31 per cent of children aged 6–23 months in Kenya were fed nutritionally adequate diets in 2022. We **conducted consumer insight research** (market scans and qualitative studies) to understand drivers of food consumption behaviours among **households with children aged 6–23 months** in Busia and Kisumu.[i]

Key findings

Knowledge, perceptions and influences around nutrition and health

Perceptions of healthy foods and unhealthy eating

Participants understood healthy eating as **balanced meals with a variety of foods**, supporting **body strength, energy, and blood health**. They emphasised **safe food preparation** and preferred **natural foods over processed** ones. Many aspired to feed their children more **dairy, flesh foods and instant cereals/baby foods** to improve nutrition.

Characteristics of healthy children and adults

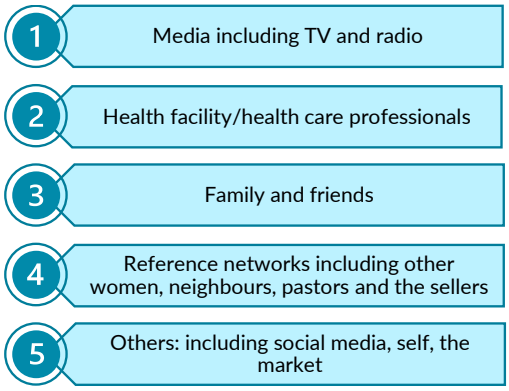
Health was defined by **physical signs and social well-being**. Most participants preferred an **overweight body type**, viewing it as **healthy and ideal** for themselves and their children.

Food information sources and messaging

Participants learned about new foods through **TV and radio** – valuing **visuals and preparation tips** – and from friends, family and **market sellers**. Foods conflicting with **personal, cultural or religious beliefs**, or those perceived as costly or **potentially harmful**, were often rejected. **Health care professionals were the most trusted source** of health and nutrition information.

Media engagement and advertising

Radio, TV, phones and newspapers were common media sources. **Cereal ads were most recalled**, motivating purchases and aspirations. However, **lack of finances was the main barrier** to buying advertised foods.



...hearing an advertisement on radio/TV sometimes they have cooking sessions on TV.
-Female caregiver IDI, Kisumu

From health workers. They teach us how we need to feed when we visit the hospital.
-Female caregiver IDI, Kisumu

Friends can tell me.
-Female caregiver IDI, Busia

From friends, community health workers, social media, Facebook, pastors, and neighbours.
-Female caregiver IDI, Kisumu

Figure 1: *Sources of health and nutrition information in households with young children in Busia and Kisumu.*

Food preparation and consumption

Kitchen audit

Most **kitchens lacked proper food storage**; only a few households had cabinets or granaries. Others used small containers, baskets, plastic racks, or ropes suspended from the roof. **Refrigerators were absent**, and **baby food was rarely stored**. Most households used **charcoal stoves for cooking**, with electricity mentioned in just one household.

Meal preparation and serving

Most households **prepared carbohydrate-based meals** using **unbranded foods** from local kiosks or markets. Common condiments included oil, salt, tomatoes, onions, Royco cubes, sugar and coriander – also used in preparing children's food. **Boiling** was the most common cooking method; participants also fried and stewed the foods.

Average **meal preparation time was 37 minutes**. Most **meals were freshly prepared**, though some households reused components like fish or vegetable stews from the previous day's supper; or purchased precooked and ready-to-eat food items, especially at breakfast and lunch.

Most households did **not prepare separate meals for children**, **but modified cooked family foods for the baby (6–23 months old)** by mashing, blending, cutting into small pieces or soaking in soup. When **special meals** were made, they included **porridge, Weetabix, noodles, rice or Irish potatoes**.

Families **valued affordability** and **convenience**, often favouring **meals that could be eaten by all** family members (see Figure 2).

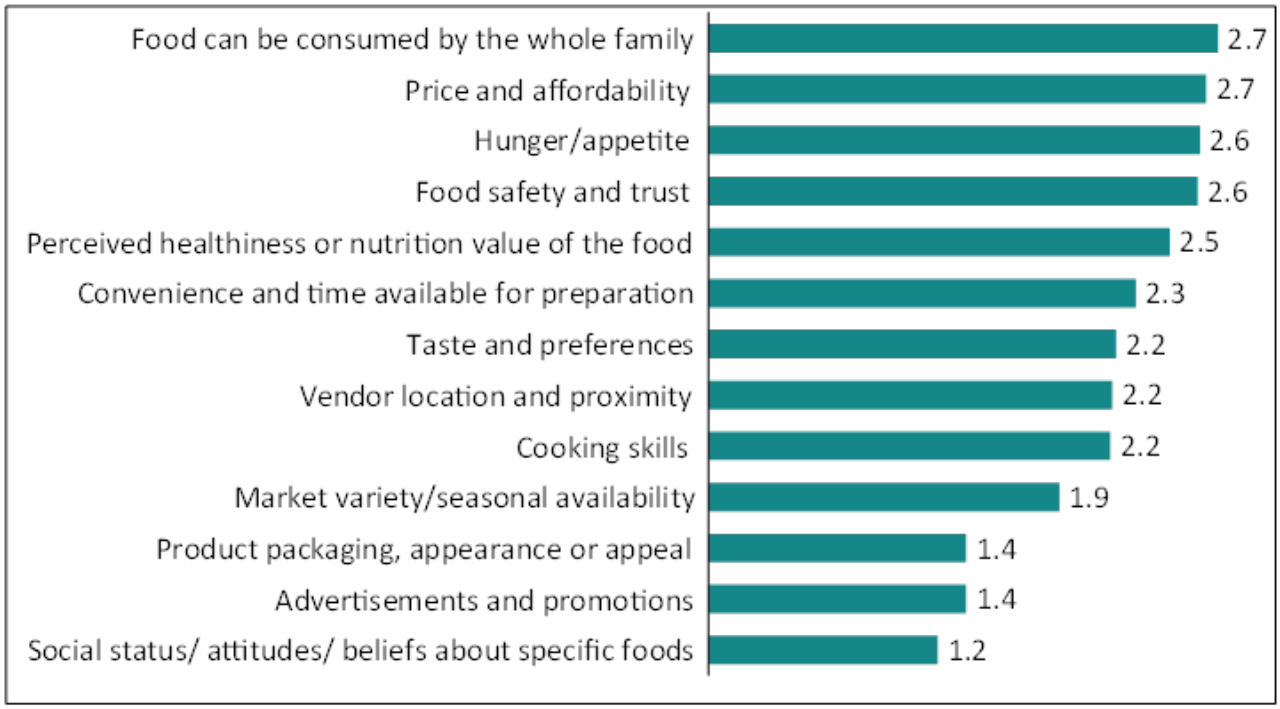


Figure 2: *Ranking of factors influencing foods and meals prepared and consumed in a typical household with young children. The bars are standardised scores calculated for each factor based on its ranking by households on a scale of 1–5.*

Eating patterns and behaviours

Many households consumed carbohydrate-rich diets **comprised of cereal-based foods**, alongside white roots and tubers. Common **protein sources** were **legumes**, especially beans, along with **nuts** and seeds, with fish – particularly **small fish** – as the primary animal protein consumed.

Common meals and foods were **fried wheat products** (mandazi, samosa, doughnuts) at breakfast, and **ugali, rice and potatoes** at lunch and supper.

However, **one third** of the households **missed breakfast regularly**. Supper was the most consistently cooked and consumed meal. Most households **skipped morning and afternoon snacks**; those who snacked ate fruits like bananas, avocadoes, mangoes, passionfruit, pineapples, jackfruits, dates, guavas, and **instant baby foods** as **snacks for children aged 6–23 months**. Most **children were fed by their mothers**, though some fed themselves or were assisted by older sisters. In a few instances, we observed the index child being **force-fed porridge at mealtimes**.

Most **children 6–23 months old were also fed carbohydrate meals** such as porridge (maize, sorghum, millet, cassava), rice and boiled/mashed Irish potatoes or plantains; **some were breastfed or fed instant baby foods** (Weetabix or Cerelac). **Flesh foods** – fish, beef, poultry – **and their soups** were the main protein sources.

Household shopping patterns

Shopping trips: location and frequency

Households mainly **shopped at nearby dukas/kiosks and open-air markets** usually within a 10-minute walk. Some used motorbikes, paying KSH 50–60. Dukas/kiosks were preferred for processed foods, while open-air markets were frequented for fresh produce and condiments. **Proximity, low prices and access to credit facilities** were **key reasons** for their choices.

Most households **shopped daily** for food and household items, **guided by available funds**. Shopping trips were mostly made **by women**, sometimes **children**, driven by immediate needs.

Food was given priority over other household items. Women made decisions on most food purchases, but **men controlled overall food budgets**, especially for expensive and bulk items.

Planning

More than half of the participants **prepared food budgets but rarely used** them. Shopping **lists were made when extra funds existed**, with flexibility in-market for promotions, missed items, children's requests or substitutions. **A few** participants prepared and **adhered to their shopping lists to avoid overspending.**

In-market food purchase decisions

Key **factors** influencing food purchases **were cost and perceived health/nutrition benefits**, followed by appearance, taste and preferences, food safety and trust, habit and tradition/culture.

Key **drivers of food choice** included the **child's preference, available funds, meal requirements, affordability, nutrition and health benefits**, enhancing meal taste, familiarity with the product and attractive packaging.

For packaged foods, especially for children, **the Kenya Bureau of Standards (KEBS)[ii] mark** was seen as an **assurance of product safety and quality**.

In-store customer experience

Customer service: households generally had positive experiences at their outlets. They valued how the vendors treated them, product information provided, credit facilities offered and cleanliness.

Food safety: participants valued food safety, selecting items free from pests, clearly labelled with expiry dates and KEBS marks; they viewed foods wrapped in newspapers or magazines as unsafe.

Product function: participants appreciated food products that were sealed well, with packaging that shielded the food product from physical damage.

Visual appeal: participants preferred product packages where colours were warm or inviting.

Information: participants knew about the products they purchased because they were available at the outlet, had been told by friends, or had known the product since childhood.

Food marketing and promotions

In-store and general advertisements and promotions included garlands, posters and product displays. Several instances of advertising were noted:

i. **Garlands** were suspended either on the roof of the outlet or at the entrance. Products advertised included **hot beverages and energy drinks**.
ii. **Products displayed on surfaces** such as shelves including **bread, flours**; and **sachets** suspended in the outlets such as **condiments, hot beverages, soya chunks and snacks**.
iii. **Posters placed on the outlet doors and walls.** Products advertised included **sodas, beverages, noodles and potato crisps**.
iv. **Placement strategies** (end-of-aisle, eye-level) **and price discounts** for **breakfast cereals and teas** used to influence purchasing decisions in **supermarkets**.

Consumer awareness

Most participants **recalled few advertisements for new products** in the outlets they shopped in, but **perceived some as false advertising**.

Product availability and characteristics

Availability and characteristics of packaged foods

Cereal flours including fortified maize and wheat flours were **widely available** (84–100 per cent) in retail outlets. Overall, smaller packs were more expensive per unit. **Porridge flours were the most expensive**.

Baby foods – especially instant products – were **disproportionately expensive**, with smaller packs double the price per 100g versus larger packs. Baby food was **not sold in most outlets (see Table 1).**

Cereal flours and edible oils showed the **highest levels of fortification, in compliance with national policy**. All **edible oil super brands** stated on front of pack that they were fortified with vitamins A and D and had the fortification logo, but only **25 per cent of the products indicated the actual fortification levels for vitamins A and D in the nutrient content table.**

No fortified rice or wholegrain maize flour was found in the retail units sampled.

Most fortified foods had **the Ministry of Health fortification logo**; however, most **consumers were not aware** of the logo and what it meant.

Labelling of packaged and processed foods

General information: Most products had basic labelling information **including nutrient content** and the KEBS **standardisation mark of quality**.

Nutrient labelling inconsistencies: Most presented nutrient values **per 100g**, but **some** flour displayed values **per 1,000g or 1kg**, making comparisons difficult. A few flour products provided **inaccurate nutritional information**.

Age-appropriateness: Suitability of **family instant breakfast cereals** – often fed to children aged 6–23 months – **was unclear**. Only one product with over 5 per cent fibre content included the below **small-print disclaimer** on the back of the package:

> "Where a product's fibre content exceeds 5% m/m. Product is not recommended for individuals under the age of 36 months"
> – Small print on common instant cereal product

Category	Subcategory	Products	Brands	Fortified (%)	Price range /100g/ml (KES)	Pack size range	Availability
Cereal flours & rice	Wheat flour, white	44	11	84%	9.67–12.00	500g–24kg	✓ B&K ✓ B&K ✓ B&K ✓ KSM
	Maize meal (sifted)	21	3	100%	10.46–12.00	500g–24kg	✓ B&K ✓ B&K ✓ B&K ✓ B&K
	Wheat flour, wholemeal, brown	8	5	100%	13.75–15.50	1kg–2kg	✓ B&K ✓ KSM
	Porridge flours	25	9	28%	14.95–17.00	500g–2kg	✓ B&K ✓ KSM
	Rice (white, brown)	28	5	0%	25.40–26.72	1kg–10kg	✓ B&K ✓ B&K ✓ B&K ✓ B&K
Bread & breakfast cereals	Bread (white or brown)	23	5	Most (via flour)	13.00–16.00	400g–800g	✓ B&K ✓ B&K ✓ B&K
	Breakfast cereals & biscuits	10	3	Most	44.80–124.00	<50g–1kg	✓ B&K ✓ KSM ✓ B&K
Baby foods	Porridge flours	17	8	67%	12.20–17.00	450g–1kg	✓ B&K ✓ KSM ✓ B&K
	Instant cereals	10	3	67%	100.00–202.50	<50g–400g	✓ B&K ✓ KSM ✓ B&K
	Infant formula milk	3	3	All	436.00–490.00	400g–900g	✓ BSA
Fats & oils	Cooking fat	16	3	93% vit A, 69% vit D	19.25–44.40	100g–20kg	✓ B&K ✓ BSA ✓ B&K ✓ BSA
	Cooking oil	15	3	71% vit A, 62% vit D	24.00–33.40	250ml–10L+	✓ B&K ✓ B&K ✓ B&K ✓ B&K
	Margarine	6	4	Most	56.00–121.00	30g–1kg	✓ B&K ✓ B&K ✓ B&K
Dairy & eggs	Milk (Ultra Heat Treated), including flavoured	15	3	Some (Ca, vit D)	9.67–18.80	200ml–500ml	✓ B&K ✓ B&K ✓ B&K ✓ B&K
	Fresh pasteurised milk	18	4	Few	15.50–16.0	200ml–1L	✓ KSM ✓ KSM ✓ KSM
	Eggs	10	10	None	17.80–21.27	Single units	✓ KSM ✓ B&K ✓ B&K ✓ B&K
Sugar beverages	Fizzy drinks/soda	25	3	None	9.05–12.50	200ml–5,000ml	✓ B&K ✓ B&K ✓ B&K
	Fruit nectars (with added sugar)	19	3	None	12.67–21.60	200ml–1,000ml	✓ B&K ✓ KSM
	Dilutable fruit-flavoured concentrates	16	3	None	7.23–9.67 (diluted)	200ml–5,000ml	✓ B&K ✓ B&K
	Fresh fruit nectars (no added sugar)	5	3	None	Not specified	200ml–1,000ml	✓ B&K ✓ B&K
	Flavoured powders	2	1	None	Not specified	4g–10g	✓ B&K ✓ B&K

Table 1: *Availability and characteristics of packaged and processed foods sold in selected retail units in Busia and Kisumu. Key: B&K= product found in Busia and Kisumu, BSA = product found in Busia only, KSM = product found in Kisumu only. Colour coding = supermarket, convenience store, local shop/kiosk 'duka', open-air market*

Unpackaged and fresh foods

Raw grains: White maize and rice were widely available. **Maize was the cheapest** though prices rose by up to 27 per cent; **millet** was the **most expensive**.

Roots and tubers: White potatoes, cassava and orange-fleshed sweet potatoes were sold in most markets. **Prices were relatively stable**.

Legumes, nuts and seeds: Soyabean, beans, grounds and cowpeas were sold in most markets. Prices fluctuated. **Green grams were the cheapest**; sesame seeds the most costly. Biofortified high-iron beans were not found.

Eggs were present in most markets, but native chicken eggs cost 40 per cent more than eggs from layers. **Prices rose by 15–20 percent**.

Meat and offal: Offal and feet were the cheapest; chicken was the most expensive. **Chicken livers were not found**. Pork prices rose by 33 per cent, beef/chicken 10–15 per cent and 13 per cent for offal.

Fish and seafood: Small fish and sardines were the cheapest and widely available in the markets. Prices rose by 10–18 per cent but fell by 12 per cent for fresh sardines.

Fresh vegetables and fruits: Leafy greens were widely available, with prices lowest during rainy seasons. Vitamin A-rich vegetables saw price increases of up to 25 per cent. Common fruits, mango and avocado, were affordable and stable in price.

Food category	Items found	Most common (Top 5)	Cheapest (Top 3) with average price (KES/100g)	Price trend past year
Cereals, grains & flours	22	White maize (dried), maize meal, wheat flour, white rice, millet	White maize (grain) ~7.0, sifted maize meal ~9.5, red sorghum ~10.0	↑ 0–25% ↓ green maize
Roots & tubers	11	White potato, fresh cassava, white sweet potato, plantains, orange-fleshed sweet potatoes	White sweet potato ~3.0, fresh cassava ~3.5, plantains ~4.0	↓ 0–37% (orange-fleshed sweet potato price dropped 37%)
Legumes, nuts & seeds	27	Soyabeans, green grams, groundnut flour, cranberry beans, yellow beans	Green grams ~10.0, red kidney beans ~11.5, navy beans ~12.0	↑ 0–48% ↓ 13% (black beans, bambara nuts)
Meat & offal	21	Beef with bone, beef tripe, pork meat, pork liver, beef liver	Feet (goat/pork) ~18.0, beef tripe ~19.0, beef kidneys ~20.0	↑ 10–33%
Fish & seafood	14	Small fish, sardines, fresh tilapia, Nile perch, catfish	Mudfish ~10.0, sardines ~12.0, small fish ~14.0	↑ 10–81% ↓ 12% (sardines)
Dairy	5	UHT milk, yoghurt, fermented milk	Fermented milk ~12.4, UHT milk ~13.2, yoghurt ~28.4	↑ 6–13%
Eggs	3	Layer eggs, native chicken eggs	Layer eggs ~17.8	↑ 15–20%
Vegetables	35	Kale, cabbage, pumpkin leaves, amaranth, spinach	Pumpkins ~3.0, white cabbage ~4.5, pumpkin leaves ~5.0	↓ 0–55% (leafy veg) ↑ vitamin A-rich vegetables
Fruits	21	Avocado, oranges, ripe bananas, ripe mangoes, watermelon	Jackfruit ~6.0, avocado ~6.5, watermelon ~7.0	↓ 0–38%

Table 2: *Availability and price trends for fresh and packaged foods in eight markets in Busia Municipality.*

Policy recommendations

1. *Expand access to affordable, fortified staples for young children*

Mandate fortification of baby porridge flours and subsidise production and distribution of fortified products (eg, maize meal, porridge flours, oils) for low-income households with children under two. Promote smaller, affordable packaging for baby foods to accommodate daily shopping habits.

2. *Strengthen nutrition labelling and consumer awareness*

Require front-of-pack labels showing age-appropriateness and nutrient content using simple symbols and local languages, especially for common instant foods and cereal products. Enforce accurate nutrient labelling and raise public awareness of the Ministry of Health's fortification logo through media and market outreach.

3. *Invest in trusted, community-based nutrition education*

Integrate food-based nutrition counselling into maternal and child health services, with an emphasis on affordable, locally available foods. Train health workers and community health volunteers and use radio/TV to share culturally relevant, evidence-based messages on healthy eating and disease prevention.

4. *Strengthen retail environments to promote healthier choices*

Partner with small retailers and markets to market fortified products. Regulate advertising of unhealthy foods targeted at children, and support informal vendors with training on food safety, hygiene, and planning nutritious family meals.

5. *Address market gaps for nutritious foods*

Support production to stabilize supply of nutrient dense-foods and promote fair pricing for small packages of fortified foods – especially instant baby foods. Invest in reducing post-harvest losses through improving food processing and cold-chain infrastructure. Pilot locally enriched/fotified porridges or point-of-use micronutrient powders for children aged 6–23 months.

References

[i] Lorine Nyongesa, Veronica Ochieng, Daniel Omollo, George Ooko, and Florence Nabwire, *Food Environments, Consumer Behaviours, and Diets of Households with Children aged 6–23 Months in Urban Kenya: Insights from Kisumu City and Busia Town* (University of Cambridge Institute for Sustainability Leadership, 2024).

[ii] The Kenya Bureau of Standards mark is issued to a firm to certify that a particular product conforms to requirements of Kenyan or approved standards.