Food environment toolkit to inform consumer-driven market system programming for better maternal and child nutrition: Learning from a practical application in rural Lilongwe District, Malawi

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**Introduction**

**Background**
- Food security programs are shifting to integrated market system and nutrition programming, which requires understanding how food environments can facilitate the acquisition and consumption of nutritious foods by specific target groups.
- There are currently no tools to inform such integration.

**Study Objectives**
- Design and test a toolkit to measure personal and external food environment factors (Turner et al., 2018) that influence consumption of dairy and fish.
- Validate the findings with market stakeholders to inform food market system programming.

**Methods**
- Mixed methods cross-sectional study in two randomly selected Traditional Authorities (Chadza and Khongoni) in Lilongwe District.
- Developed a matrix to assist in identifying foods that fill nutrient gaps for women and children <5 years, are mainly obtained through markets, and provided via market systems that have incentives to reach vulnerable consumers.
- **Personal food environment:**
  - 4 focus groups. Survey of mothers (N=200)
  - Frequency
  - Accessibility
  - Affordability
  - Convenience
  - Desirability
- **External food environment:** Desk review and key informant interviews (N=18) with market stakeholders to assess availability, prices, vendor and product properties, and marketing and regulation.
- **Stakeholder workshop:** Validate findings and identify recommended market actions based on evidence.

**Results**

**Personal Food Environment**
- The most frequently purchased dairy and fish products were yoghurt drinks, UHT milk, and powdered milk (Figure 1A) and dried small and large fish (Figure 1B).

**Figure 1. Frequency of purchasing dairy and fish**

**External Food Environment**
- Market stakeholders characterized their values chains as:

**Stakeholder Workshop Recommendations**

**Dairy value chain:**
- Improve rural distribution models
- Coordinate a panel of stakeholders to consider the regulation of raw milk and formulate policy recommendations
- Centralize regulation to ease the private sector’s compliance management, and coordinate a coherent direction for future dairy regulations
- Increase sensitization for rural consumers on the nutritional value of milk

**Fish value chain:**
- Facilitate effective stakeholder coordination through improved communications and formal platforms
- Improve aggregation and processing capability for fish farmers and groups
- Coordinate fish production and marketing to address issues of seasonality
- Encourage private sector actors to consider agent-based distribution models
- Grow the semi-commercial production base

**For more information**
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