



Formative Research for the Development of a Home Fortification Programme for Young Children in Burundi: Results of the Feasibility Study

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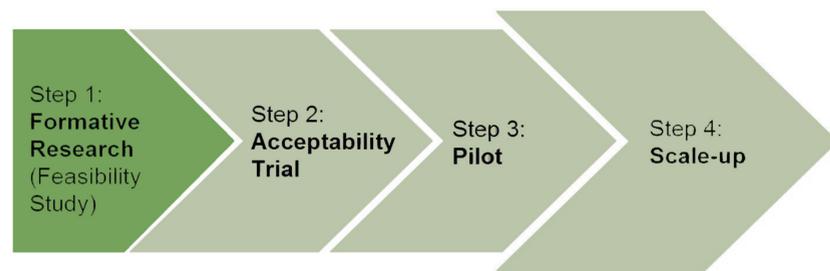
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Background and Rationale

The 2010 Burundi Demographic and Health Survey indicated that the Burundi diet generally lacks the energy and micronutrient density required for proper growth and development of young children. 45% of children aged 6-59 months are anaemic in Burundi¹, likely due to insufficient intake of bioavailable iron in relation to the high iron needs to support rapid growth and brain development during 6-23 months of age^{1,2}.

Home Fortification with MNP is recognized as an efficacious, effective, and safe way to improve the nutritional quality of young children's complementary foods where the diet is lacking micronutrients such as iron³. MNP provide at-risk populations with a mixture of vitamins and minerals that are added directly to semi-solid foods prepared at home⁴.

While the Micronutrient Project at UBC has conducted research for Home Fortification with MNP in six countries, differences in knowledge, attitudes and practices about complementary feeding, food sources, and understanding of anaemia and iron deficiency are common between and within countries. A feasibility study was done with the main objective of determining these differences to guide messages for an Acceptability Trial such as appropriate food vehicles and the reasons for providing MNP to young children in Burundi.



Methods

The feasibility study targeted caregivers of children 6-23 months, health professionals (nurses and health promotion technicians), as well as village and community leaders, religious leaders, and community-level health agents (community health workers, and members of village health committees). Focus group discussions (FGD) and key informant interviews (KII) were completed to collect qualitative data on feeding of young children; knowledge, attitudes, and practices related to anaemia; and potential barriers to use, acceptance, and adherence of MNP. A total of 20 FGD (n=100) were done with each of five mothers (n=50) or five fathers (n=50) of children 6-23 months per group. KII (n=110) were done individually with mothers (n=10) and fathers (n=10) of children 6-23 months, health professionals (n=20), and village and community leaders (n=70).

Results

Findings of the FGD and KII indicated that in general, participants believe that the most important foods for young children are vegetables, fruits, and beans. A majority of mothers, fathers, village/community leaders, and health professionals stated that the most common first food given to young children in addition to breastmilk is fruit. Examples included ripe bananas, passion fruit, and tree tomatoes. The second most common response was bouille, a watery porridge made from mixed grains such as maize or sorghum flour. Other early foods include vegetable greens such as cassava or amaranth leaves, cooked bananas, sweet potatoes, and cassava.

Mothers indicated that they commonly give their children vegetables like cassava or amaranth leaves and cabbage for all meals of the day. Beans are another food frequently given to children, mainly at midday or in the evening. Palm oil is added to most vegetables and beans, which is a source of both fat and vitamin A. Small fish sauce, known as ndagala, is also given to some children and is a good source of energy and protein. Other responses were that porridge is given to children at breakfast and green bananas are given at midday.

Poverty appears to impact all aspects of young child feeding as households lack adequate amounts of food, dietary diversity, animal foods, and general nutrition knowledge. Many mothers and fathers said they are poor and lack the means to feed their children. There was a positive response with regards to the concept of Home Fortification with MNP. Nearly all participants of the FGD and KII said they would be in support of MNP being added to their children's food if it is beneficial for their health.

Discussion

Since an infant's stomach capacity is very limited, it is important to avoid filling it with low calorie foods during this rapid period of growth. Vegetables and fruits generally will not meet the recommendation for energy density of first foods as they have high water content. Moreover, a diet consisting mainly of vegetables and fruits is not sufficient in preventing micronutrient deficiencies and infections in young children⁵.

On the other hand, soft fruit such as bananas may be a good vehicle for MNP. Cassava and amaranth leaves and beans are sometimes softened enough with palm oil to be the right consistency for MNP. Bouillie may not be as it is quite fluid, so MNP may dissolve and change the taste or colour of the food, reducing acceptability.

Conclusions and Recommendations

Participants of the FGD and KII expressed that they are enthusiastic and eager for a Home Fortification with MNP program to begin. Accurate and thorough information on MNP usage, content, and possible side effects was considered essential by all participants, as were the reasons young children need MNP.



- Field-test possible food vehicles: soft ripe bananas, mashed cooked green bananas or beans, and cassava and amaranth leaves softened with palm oil
- Sample different consistencies of food vehicles (e.g. liquid or solid)
- Conduct cooking demonstrations with a variety of local foods are needed to allow caregivers to experiment with adding MNP to children's food
- Involve respected community leaders and members (e.g. religious leaders) to help mobilize and sensitize
- Provide health care staff and community health workers with simple-to-use and accurate communication materials in order to support caregivers

References

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