© R Carlson

Tackling malnutrition: understanding local needs and factors behind seasonal hunger

The challenges

Child malnutrition and stunting have posed challenges to populations in East Africa and the Horn of Africa for several decades. However, rates have not only continued to increase during this time, but now have a broader impact: for many years, it was primarily youngsters in agrarian communities that bore the brunt of the impact. Today, the effects are being experienced by both adults and children in pastoralist communities, and are exacerbated by ongoing population growth.

A variety of factors contribute to malnutrition in the Karamoja region. For instance, agro-pastoralist households (particularly poorer ones) rely on crop production for livelihood security – but variable rainfall and temperatures make this an unreliable food, production or income source. Meanwhile, a reduced availability of milk – both cow and goat – resulting from decreased access to pasture and water sources, has also been cited as a contributing factor to malnutrition and livelihood insecurity.

Livestock ownership has also long been a critical food and income source for a large number of households. However, during the last decade, a decrease in access to rangeland, varied levels of livestock commercialisation, a shift in

Key messages

- Malnutrition and stunting have been significant concerns in the East and Horn of Africa for decades – and are now affecting adults as well as children within pastoralist communities.

- Despite a number of initiatives undertaken by non-governmental organisations to help tackle these issues, little success has been made.

- The Karamoja Resilience Support Unit (KRSU) investigated why interventions were not producing their desired outcomes, using the participatory epidemiology (PE) approach to obtain more detailed insights and feedback from those impacted.

- Inspired by KRSU's success with PE, the Nawiri project has adopted the same approach in their explorations of the causes and seasonality of malnutrition, and steps that can be taken to combat it.

livestock ownership towards wealthier households, and disease-related losses have altered reliance on this sector.

Finally, gender imbalances within the household have been noted as a leading factor in malnutrition: women are typically burdened with childcare and household duties, meaning they are able to spend less time on producing their own crops for consumption or working elsewhere to contribute income for food. This is also leading to an increase in malnutrition among adult women, as when food is scarcer, they prioritise giving it to their children rather than themselves.

To help combat these causes and assist in improving nutrition, a number of programmes have been implemented; in 2016, for example, a total of 24 nutrition-focussed projects were underway in Karamoja. Yet, malnutrition persists. So why are these initiatives not having the intended impact?

What did KRSU's research entail?

To help explain why existing interventions are not proving successful, and propose alternative solutions, the Karamoja Resilience Support Unit (KRSU) team – led by Tufts University and supported by USAID, Irish Aid, and UK Aid – adopted a different approach. Most research is conducted during, or focussed on, particular months of the year, resulting in knowledge gaps regarding the overall year-round malnutrition picture. These studies also often use statistics and external viewpoints to draw conclusions and recommendations rather than involving those specifically affected by the issues.

To address some of these challenges, the KRSU research was based on the participatory epidemiology (PE) approach – which enables participants to provide feedback and knowledge to enhance the findings. For example, women in Karamoja were asked directly about their experiences with malnutrition – how it impacts them and those in their households, what they view as

© FAO/Luis Tato

Adopting a PE approach allowed us to obtain local perceptions of malnutrition and drivers and identify interventions they felt would address those drivers.

– John Burns, research and design lead at Tufts University and member of the Nawiri team in Kenya

the primary contributors, the seasonality of malnutrition, and what steps need to be taken to help reduce its occurrence.

To start, in the summer of 2018, 22 focus group discussions (FGDs) with between five and eight women in each district were held. During these, participants from the districts of Amudat, Kaabong, Kotido and Moroto were asked to share their understanding of malnutrition-related issues and specific words or terms in their local language relating to them. These were followed by the use of PE methods (causal diagram, monthly calendar and proportional piling) that covered 24 FGDs in only three districts (Amudat Kotido and Moroto) comprising eight to 12 women in each. During these exercises, the women were asked questions and shown images and diagrams to gauge viewpoints and obtain feedback.

Strong correlations between malnutrition and factors such as workloads, childbirth, rainfall, crop and milk availability, and disease prevalence were all found. Discrepancies and similarities between those in pastoralist and agro-pastoralist communities were also noted. Overall, the use of PE as a research method was shown to be effective, with women's insights generally aligning with information from official reports and secondary literature. The Hidden Peaks report, produced by the KRSU team following this research and published in November 2018, stated: "Women provide highly plausible accounts of the causes of malnutrition" – affirming that their first-hand contributions and views are critical in developing understanding in this area.

As a result of the research, a number of recommendations were made – aimed at actors such as non-governmental organisations, policy makers and the government. Provision of nutritional relief, through methods such as food kits (comprising nutritious flours and grains), seed supplies, and aid in establishing kitchen gardens, was cited as a key area in tackling malnutrition, and was particularly necessary during periods of drought. It was also stated that enhanced support in terms of income generation is also required, to reduce reliance on sole income and food sources. Furthermore, greater focus needs to be put on providing improved healthcare

and sanitisation measures to reduce incidences of disease such as malaria and diarrhoea, which are associated with child malnutrition. The women also called for improved education for girls in order to encourage greater livelihood opportunities in future.

Use of evidence by implementing partners: the case of the Nawiri project

Funded by USAID, the Nutrition in Arid- and Semi-Arid Lands Within Integrated Resilience Institutions (Nawiri) project focuses on improving food and nutrition outcomes in the Isiolo, Marsabit, Samburu, and Turkana counties of northern Kenya. "These are dryland counties; pastoralism or livestock production is the primary

> *The PE method informed the first testing stage of the Nawiri research project, and has also been used to shape the upcoming second 'implementation' phase of the programme.*
>
> *– John Burns, research and design lead at Tufts University and member of the Nawiri team in Kenya*

livelihood in those areas, and they've experienced high rates of global acute malnutrition," explains John Burns, research and design lead at Tufts University and member of the Nawiri team in Kenya.

With a supporting budget of US$186 million, 200 employees within the Catholic Relief Services (CRS) component, and implementation support from CRS and Mercy Corps, Nawiri is currently researching the causes and seasonality of acute malnutrition in these regions, to explore the ways in which these challenges can be effectively addressed. The main beneficiaries of the project will ultimately be the vulnerable communities in the four aforementioned regions – specifically those located in malnutrition hotspots. However, the project also aims to benefit county government and institutions in these areas by supporting systems strengthening.

A PE-focused approach was adopted for Nawiri's research, in part influenced by the success of KRSU's previous PE-led research. Looking "at local perceptions of malnutrition and drivers," Burns explains, would enable the Nawiri team "to identify the interventions that they felt would address those drivers."

Alongside PE, Burns and his colleagues have also used 'hot spot mapping', whereby existing nutrition-focussed data collected during the last decade was used to identify precisely where the malnutrition hotspots are in various counties, so specific responses can be targeted accordingly.

© FAO/Luis Tato

The PE method has not only informed the first testing stage of the Nawiri research project: it has also been used to shape the upcoming second 'implementation' phase of the programme, which is in the process of being refined as consultations continue with donors and county-level stakeholders.

In addition to influencing the methodology, technical support from KRSU was crucial in the project's development – and two members of the KRSU team led a five-day training session with Nawiri staff to provide essential insights into the issue of acute malnutrition.

With the research and programme still underway, impacts at community-level are yet to be observed. However, the KRSU PE research has played a crucial role in widening the scope of the Nawiri team – which will hopefully lead to greater outcomes for more individuals once the project and research concludes in 2025.

For example, as recommended in the KRSU research, "there's a much stronger focus [by Nawiri] on supporting livelihoods and income generation, particularly for women," states Burns. This involves "looking at activities like business mentorship, linking women and communities to markets, supporting value addition around key sectors, and providing access to capital or credit or loans."

The broader focus within Nawiri's research has also underlined how malnutrition drivers are very context-specific – not just seasonal, but geographical. "With two villages, even within a very close distance, the relevance of different issues or factors contributing to malnutrition, or the relative importance, could be quite different. And

hence, the response required may need to be different," emphasises Burns. This awareness is crucial for decision-makers to develop specific, relevant interventions that are to have effective and lasting outcomes.

Finally, the Nawiri team hopes their research will be used to influence policy change. As such, they are currently engaging in different capacity-building activities with various county governments to help design and evaluate interventions, and highlight the value of the PE approach. "I think PE is a method that has interest and potential," states Burns – and early indications suggest high-level actors agree. Following six months of discussions and sensitisation meetings with the two county governments, "Marsabit County actually seconded one of their county staff to join the study," he reveals. "The counties have requested training on PE methods for their staff during phase 2, and there is also interest from the Ministry of Health (at national level) in using the PE approach for nutrition and possibly health-related research."

USAID Karamoja Resilience Support Unit (KRSU)