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HOW TO INCREASE DEMAND, AVAILABILITY, ACCESIBILITY, & CONSUMPTION OF HIGHLY NUTRITIOUS FOOD

LEARNING BRIEF

INTRODUCTION & RATIONALE

The Cost of the Diet (COD) studies conducted in Samburu and Turkana counties looked at what nutritious foods are locally available in the market, with the aim to inform strategies for improving production, availability, and market access. The studies also looked at the most cost-effective food consumption patterns to meet the nutrient needs of an average household. This information, along with other research and learning inquiries, provide input to the design of nutrition-sensitive market and livelihood strategies as well as the design of Maternal, Infant, and Young Child Nutrition (MIYCN) Social and Behavioral Change (SBC) strategies that enable poor households to maintain year-round nutrition security for women and children. Building on information from the Household Economy Analysis (HEA) studies, the COD studies also quantified the gap between household purchasing power in different wealth groups and the minimum cost of a nutritious diet. The COD software also modeled the effect on the COD of potential activities for USAID Nawiri to pursue.

Persistent global acute malnutrition (P-GAM) is a challenge in Samburu and Turkana counties where USAID Nawiri operates. Global acute malnutrition rates are consistently at or above the World Health

Organization established emergency threshold of 15%. Stunting of children under age five has improved but is still a concern, ranging from 18% to 30% in the sub-counties, while 40% to 45% of women of reproductive age have an unacceptably low Body Mass Index, with adolescents among the most affected. Various studies in the two counties, including recent Knowledge, Attitudes, Beliefs and Practices studies supported by UNICEF,¹ have found relatively good breastfeeding practices, but poor complementary feeding practices and poor feeding practices during illness. Women have good knowledge of general recommendations for infant and young child feeding, but are unsure how to put them into practice, resulting in poor dietary intake, which is a driver of acute malnutrition. These COD studies were complemented by an in-depth analysis of dietary norms and beliefs, and they focused on a list of specific nutrient-dense locally available foods and identified which available food items were cost-effective and nutrient-dense for developing useful recipes for complementary feeding. In addition to this knowledge-into-practice gap, other previously identified constraints include women's workload (including workload related to water access). The Gender Analysis has looked at how women's workload can be reduced through gender equity approaches.

The Longitudinal Study confirmed a lack of diversity in the diet. As noted in HEA studies and the Food Market Systems Assessment, household food security in both counties is related to availability, affordability, and access to nutritious foods and the main livelihoods (i.e., crop farming, rearing livestock and fishing) rely heavily on natural resources. County consultations also highlighted gaps in willingness to pay for nutritious food and cultural beliefs preventing purchase of specific nutritious food groups. Livelihoods are vulnerable to extreme weather events, disease outbreaks, and resource-based conflicts like livestock theft. Food prices are higher than the national average due to high transportation costs as a result of high fuel prices and poor road infrastructure.

LEARNING JOURNEY

The objectives of the COD were to identify the most cost-effective nutrient-dense foods locally available in markets, determine the reported frequency of consumption (or non-consumption) of these foods by households and calculate the minimum cost of a nutritious diet for different households, such as those with a pregnant or lactating mother or an adolescent mother (note that the HEA found polygamous households only among the Middle or Upper Wealth groups). With the findings from the COD studies, the effect of different potential activities on the cost of the diet was modeled using software.

Working groups, composed of USAID Nawiri program staff, local partners, government officials from multiple sectors (including health, trade, finance, crop production, livestock, drought management, and water and sanitation), and headquarters technical support developed the detailed scope of work and

¹ [Turkana 2017 MIYCN Survey Report](#) and [Samburu February 2018 MIYCN & KABP Survey Report](#).

oversaw the study. The working groups facilitated wider community engagement and stakeholder participation in learning activities. Between February and May 2021, USAID Nawiri completed four COD studies in Samburu and Turkana counties in collaboration with the Ministry of Health and other local government officials. Two studies were done in the Fisheries livelihood zone and the Lodwar Urban livelihood zone in Turkana County and another two were done in the Eastern Pastoral livelihood zone and Central Agro-pastoral livelihood zone in Samburu County.

Rigorous quality control measures and ethical standards were applied; only female enumerators interviewed adolescent mothers and informed consent, approved by Save the Children's internal Ethics Review Committee, was obtained from all women. Local government officials participated in site selection, enumerator training, and supervised fieldwork. National protocols for minimizing the spread of COVID-19 were followed throughout the study. The COD study was remotely overseen and all data uploaded to the cloud and reviewed daily by the COD expert.

In November 2021, USAID Nawiri held a consultative workshop with key members of the county governments' technical teams to share the findings from the COD studies. Representatives came from several county departments: financial and economic planning, monitoring and evaluation, social protection, family health, livestock production and veterinary services, crop production, fisheries, trade, youth and gender, education and the Office of the Governor. The working sessions provided an opportunity to analyze the findings, their implications on ongoing activities, and to inform the design of nutrition-sensitive programming.

The following activities were conducted in each livelihood zone:

- Market surveys to determine what foods were available and their average cost per 100 grams
- Key informant interviews with a few of the established traders in the larger markets to obtain their perspective on opportunities and constraints
- Focus Group Discussions with adolescent mothers and mothers age 21 to 49 with children <3
- Individual Dietary Habits Interviews to determine how often food items are consumed

INSIGHTS AND IMPLICATIONS

INSIGHT N°1. Limited purchasing power and costly nutritious foods are very real barriers to uptake of recommended MIYCN practices.

There is significant variation in the average cost of a nutritious diet across livelihood zones, with limited purchasing power in all zones. Based on recent HEA data, in Turkana County the study used an average household size of 7 for the Fisheries livelihood zone and 9 for the Lodwar Urban livelihood zone, and an average household size of 8 in both livelihood zones in Samburu County, to calculate the cost of a nutritious diet that considers existing food consumption habits. The annual cost of the diet was highest in the East Pastoral livelihood zone in Samburu County and lowest in the Fisheries livelihood zone in Turkana County. The monthly gap between income available for food purchase, from HEA data, and the cost of the diet for the Very Poor wealth groups was higher in Samburu County and ranged from KES 21,077 (US\$195) to KES 21,831 (US\$202). In Turkana County this monthly gap was KES 6,080 (US\$56) and KES 12,800 (US\$117). It should be noted that although a COD study was conducted in Turkana County in 2017, it was done in a different livelihood zone than the present studies and during the leanest period of the year for food availability and thus is not comparable to these COD studies.

Implications: Using the COD software to model potential nutrition-sensitive activities, supporting household production of dark leafy greens year-round significantly reduced the cost of the diet. Water access issues would need to be considered. Supporting goat milk production year-round in sufficient quantities to provide daily milk to the mother and child reduced the cost of the diet a small amount annually, but would have a large contribution to ensuring the mother and child’s nutrient needs are met.

During the consultative workshops the following approaches were highlighted to address key problems: A) Turkana County – Supporting improved agri-business skills; new technology and improved farming inputs; extension services; leadership training and exposure visits. USAID Nawiri and partners can support water protection and rehabilitation of irrigation systems, training on new technology and the use of inputs and certification of produce. For livestock production, linkage with appropriate institutions to support improved breeding, production of fodder and extension services that address vaccination, deworming and disease; B) Samburu County - USAID Nawiri will focus on support for crop and fodder production in those sub-counties with particularly high P-GAM rates. Samburu Central, which has high crop production potential, can serve as potential demonstration sites. Certain barriers need to be addressed through county government commitment (with partner support): infrastructure improvement; lowered costs of production through subsidies, inputs and access to credit; enhanced extension services; social protection; changing cultural attitudes towards crop farming.

INSIGHT N°2. Removal of underlying social and cultural barriers to purchase of nutritious foods are required to encourage demand for cost effective nutritious diets.

There are cost-effective nutrient-dense foods available, at least in the larger markets, that are not consumed by the average household as frequently as recommended. With variations among livelihood zones, these include goat liver, donkey meat, small dried fish, chicken eggs, soybean milk curd, avocados, and palm fruit. Fish was consumed often in the Fisheries livelihood zone of Turkana County.

Goat meat and goat intestines/stomach were the most widely available and least costly animal source foods in all four livelihood zones. As an under-utilized nutrient-dense food item, goat liver was relatively available in all livelihood zones. Other animal source foods - such as chicken, chicken eggs, mutton or beef - were only available in some livelihood zones and usually only in the largest markets. Cabbage and onions, which are not nutrient-dense, were widely available and reported as frequently consumed. There is unmet demand for kale which, like all dark green leafy vegetables, is an excellent source of micronutrients. Traders are reluctant to purchase dark green leafy vegetables to sell as they find it difficult to keep them “fresh” due to poor water access in markets. The COD software also selects avocados as a cost-effective nutrient-dense fruit. In urban and large markets, avocados were available and reported by mothers as being consumed somewhat frequently. However, women were discouraged from purchasing them because they often find them to be rotten once cut open at home. Improvements in quality control would be well received and assist households to confidently purchase recommended food items. Women noted that they were extremely pleased with improvements in hygiene in markets due to coronavirus prevention measures and expressed hope that this level of hygiene would be maintained.

The COD studies and MIYCN desk review identify important cultural barriers to consumption of locally available nutrient-dense foods. Women of all ages, including adolescent mothers, reported few food taboos for children. However, they expressed many beliefs that various nutrient-dense foods have negative effects on children. Women shared beliefs that animal fats and oils can cause respiratory

problems and can lead to child obesity, that eating fish can cause children to vomit or have allergies, and that consumption of eggs can cause nausea, allergies, and swelling of the stomach. Women in all livelihood zones reported many prohibitions against the consumption of nutrient-dense foods during pregnancy due to fears of increasing the size of the unborn and then having complications during delivery. Restriction of intrauterine growth is a contributing factor to low birth weight and child stunting. Women reported that “sweets, snacks or drinks” were purchased for children at least once or twice a week showing that some disposable income could be repurposed for more nutritious foods.

Implications: These insights informed a context-specific SBC strategy, enabling the incorporation of available nutrient-dense foods into the diets of vulnerable women and children. The strategy includes male engagement through existing community groups and traditional male forums, with male Nutrition Champions, and female engagement through adaptations to the Breastfeeding Friendly Community Initiative and the Community Health Unit structure, using radio/recorded audio SBC information and cooking demonstrations. In addition, USAID Nawiri interventions will target the supply chain, including improvements in market quality control (see Insight No.3 below). This will tie into the MIYCN SBC strategy in order to strengthen both supply and demand.

COD calculations showed that the nutritional needs of a lactating mother in an average household is 20% to 50% of the COD. This is even higher for a pregnant or lactating adolescent mother. The cost for a breastfed child aged 12 to 23 months is only 3% to 5% of the diet. COD analysis showed, while meeting all the nutrient needs of the child and mother, that it is more cost-efficient to continue breastfeeding young children, along with offering complementary foods, at least until 23 months of age rather than discontinuing breastfeeding altogether. This economic information is important to share widely with all stakeholders.

INSIGHT N°3. Improvements in local access to and household production of nutritious foods will enable improvements in food consumption behaviors.

In general, a broad variety of food items were available at the largest markets in each livelihood zone with more limited variety in smaller markets. Efforts to improve linkages between larger vendors and smaller markets could increase availability of some of the more nutrient-dense foods. This is particularly important due to the cost of transport for poor households but also because women expressed that, while they have decision-making power over food purchases, they limit themselves to smaller local markets due to time and workload constraints. Triangulation of multiple studies reveals household food production is limited and focused on staples.

Implications: Specific intervention areas to improve production of nutritious foods include training households on new agronomic practices, such as kitchen gardens using vertical bags in remote arid areas and a focus on more efficient use of water by households to meet all household water needs. A private agri-nutritionist will follow-up on actual application of skills gained and promote production of drought-tolerant crops, such as sweet potatoes and cowpeas and strengthen linkages between crop producers and key market actors. A more detailed assessment of production and market linkages can be found in the learning briefs on building resilient markets in food systems and milk availability.

INSIGHT N°4. Women's economic empowerment including improved decision-making in household economic planning is critical to increasing the purchasing power of women for improved nutritious diets.

The HEA and COD study found that women's decision-making power is stronger when they have their own sources of income. Women note that when husbands and partners are gone for extended periods, they are unable to obtain credit for purchase of food and cannot sell livestock. As highlighted in the HEA brief, women participate much more than men in off/non-farm income-generating activities and are increasingly willing to try new livelihoods compared to men who seem reluctant to abandon the livestock sector that they know so well. However, women still face many critical economic and social constraints over their involvement in these new opportunities.

Implications: Targeted livelihood activities for women are required in parallel to household and community dialogues to remove cultural and social barriers to women's engagement in livelihoods and income generation activities. Incorporation of VSLA activities in Mother-to-Mother Support Groups and/or linking with existing VSLAs in addition to empowering women in business will strengthen women's and household economies. Supporting an enabling environment for and gender friendly spaces are also important. Flexible, affordable, community-driven childcare arrangements and creating more equitable sharing of chores and caregiving between men and women will support an enabling environment (please see the Labor Markets Learning Brief for more information.)

CONCLUSION

This learning has contributed to the design of nutrition-specific maternal, infant, and young child feeding strategies and nutrition-sensitive livelihoods and markets strategies and programming that enables poor households to maintain year-round nutrition security for women and children and supports the sustainable reduction of persistent acute malnutrition in the face of shocks and stresses. USAID Nawiri will support a balanced household economy (income/expenditure) based on local conditions to strengthen food production and market access to affordable, diverse, and nutritious foods. This will be done alongside a focus on women and livelihoods and enabling gender approaches, and a context specific MIYCN SBC strategy to increase demand and uptake of health services, nutritious diets, and improved WASH. A number of modifications (especially in relation to making the connection between livelihoods covering income and production and nutrition outcomes and adding contextual nuances) were made to the USAID Nawiri Theory of Change (ToC) to sub-purpose 1.1 (affordable, diverse, safe and nutritious foods are consistently available across the two counties-including in remote, last mile communities to support optimal nutrition outcomes) and 1.2 (households access sufficient, safe, diverse, nutritious and sustainable diets required by their diverse members and on IO 1.1.1 (households have resilient production systems of stable nutritious foods that maximize year-round productivity) and outcome 1.1.1.4 (vulnerable households invest in climate risk informed crop and livestock production for consumption and income including storage, tools and techniques. These insights have informed the development of detailed strategies to reach the sub-purposes of the ToC.

PRIORITY AREAS FOR CONTINUED LEARNING

A regular light touch Market Survey that includes key food items for a basic food basket might be repeated during different seasons and/or during periods of significant stress or shock. This information can be combined with the existing database to assess seasonal effects or the impact of shocks.

In the refinement of SBC approaches, the COD studies identified various topics for further exploration. For example, along with barriers to infant and young child nutrition based on local beliefs, some

nutrient-dense foods, while reported as frequently consumed by households, may not be frequently provided to children 6 to 24 months of age and/or in recommended quantities. Additionally, although fish is not widely consumed outside of the Fisheries livelihood zone, women did mention having interest in it because they knew “households in larger towns are consuming fish.” The SBC strategy will look at people’s aspirations and how this can influence behavior change.

Ongoing monitoring and evaluation will assess the dietary improvements for vulnerable women and children and identify how changes in determinants through USAID Nawiri (such as feeding practices, increased demand and access, use of household income, gender equity and more) contribute.

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