Formative research to inform adolescent programming in Uganda

Engagement for health, nutrition and sustainable development

Summary report – February 2018

THE REPUBLIC OF UGANDA
MINISTRY OF HEALTH

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Anthrologica

Acknowledgements

Global Goal 2, Zero Hunger, established a critical window of action and a unique opportunity for the World Food Programme (WFP) to play a leadership role in highlighting the nutritional and related needs of adolescents, and we thank Lynnda Kiess, Senior Policy Advisor, and Indira Bose, Fill The Nutrient Gap Consultant, for their initiative in spearheading this research at WFP.

This is a summary report of the research, and presents key findings, recommendations and considerations for policy and programming. It accompanies a longer report of the work in Uganda, a spreadsheet detailing the stakeholder mapping, and a synthesis report that summarises core learning across the four countries included in the research (Cambodia, Guatemala, Kenya, Uganda).

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All participants provided full consent for their photographs, drawings and other images to be used in this research and related documents.

Content

Introduction

Background

Adolescence is a time of significant brain development (Blum et al., 2014) and physical growth at a pace exceeded only by the critical first 1000 days (Thurnham, 2013). As identified in Sustainable Development Goal 2, Zero Hunger, addressing the nutritional needs of adolescent girls is one of the key steps towards achieving the objective of ending malnutrition by 2030. The 2013 'Maternal and Child Nutrition Series' published by *The Lancet,* the Vision 2030 Sustainable Development Goal agenda, and the Scaling Up Nutrition (SUN) movement have each played a key role in highlighting that adolescent nutrition interventions should be tailored to girls. Interventions to improve access to education, delay marriage, and prevent early pregnancies can contribute to improving adolescent girls' nutrition so they can reach their full potential (Horton, 2013; SUN, 2016; Thurnham, 2013; Black et al., 2013; Finlay et al., 2011). There is, however, a lack of evidence to guide the development of strategic nutritional messages and interventions for this specific target group and more research is needed on the nutritional status of adolescents globally (Leenstra et al., 2005; Patton et al., 2016).

In line with the global shift of attention towards adolescents, there is increased engagement and mobilisation of multi-sectoral actors around the adolescent agenda in Uganda. A number of national policies address health and nutrition needs of adolescents, including the Uganda Nutrition Action Plan; the Uganda Multi-Sectoral Nutrition Policy; the National Anemia Policy; and the School Feeding Policy. It is important to note that whilst policies have been passed by the relevant government institutions, it proved difficult to ascertain how far they had been operationalised, and their impact. Other policies of relevance, pending at the time of research, included the School Health Policy; the National Multi-National Sectoral Framework for Adolescent Girls; the Maternal, Infant, Young Child and Adolescent Nutrition Roadmap; and the renewal of the National Adolescent Health Strategy.

According to the national census of 2014, Uganda has 8.9 million adolescents (10-19 years), constituting 26% of the total population (Uganda Bureau of Statistics, 2016). Disaggregation shows equal proportions of boys and girls, but with a greater proportion of 10 to 14 year olds (55%). Most adolescents (80%) reside in rural areas which, in Uganda, are generally more impoverished than urban areas (World Bank Group, 2016).

Data on nutritional status in Uganda has historically concentrated on children under the age of five and women of reproductive age (15-49 years). According to findings appertaining to these populations, stunting, underweight, wasting, and iron deficiency anaemia constitute the most prevalent forms of malnutrition in Uganda (UBOS and ICF, 2012). National data also suggests a problem of overnutrition, as indicated by the prevalence of overweight or obesity among women of reproductive age. In urban areas, this likely results from changing dietary patterns coupled with decreasing physical activity levels. The Ugandan diet consists mainly of starchy staples and vegetables, with almost no animal-based protein (UBOS, 2014). It is characterised by low energy intake (UBOS, 2014) as well as a critical micronutrient gaps in iron, zinc, calcium minerals and vitamins A and B-12 (Harvey et al., 2010).

In 2017, the Ministry of Health and partners conducted an Adolescent Risk Behaviours survey. This reported that nationally amongst 10-19 year olds, the rate of stunting (measured as height for age <-2 standard deviation score) was 15.5%; overweight (measured as BMI for age >=1 standard deviation score) was 6.7%; and thinness (measured as BMI for age <-2 standard deviation score) was 6.5% (Ministry of Health et al., 2017). Underweight and stunting was more common among males than females, and overweight was significantly more prevalent among urban females. Factors associated with stunting included low socio-economic status, being younger, and coming from the western region, but the study called for more qualitative research to understand key risk behaviours.

Detailed information about how to reach adolescents as a specific target group remains largely restricted to the areas of sexual and reproductive health and HIV, where positive inroads have been made. There is a need, therefore, to better understand all aspects of adolescent nutrition in Uganda, and to develop innovative approaches to effectively engage them on a broader range of issues.

Research objectives

This research is part of a four-country study that is contributing to the global evidence base for adolescent nutrition. The other three countries included in the study are Cambodia, Guatemala and Kenya. The research has four overall objectives:

1. To assess the experiences, needs and priorities of adolescents regarding their nutrition.
2. To understand the policy and programmatic environment and current practices for effectively engaging adolescents.
3. To establish the preferences of adolescents regarding how they want to be engaged in programming.
4. To establish user-centred recommendations for more adolescent-friendly, context-specific nutrition interventions.

Methodology

The mixed-methods, collaborative study was conducted between February and December 2017. A country landscape analysis of adolescent programming recorded 28 key stakeholders working with adolescents in the country, and categorised the focus, timeframe and location of interventions, the target group (age, ethnicity, gender), the modes of engagement and key programme implementers. Formative qualitative research using participatory creative methodologies elicited perspectives, experiences and suggestions from adolescents and their communities. Data was collected in two districts: Moroto district in Karamoja, and Adjumani district in West Nile. In Moroto, fieldwork was conducted in Atedeoi (rural) and Katanga (peri-urban); in Adjumani, in Mungula I refugee camp (with both refugee and host communities). A

total of 312 participants were included in the study, and 144 data collection activities were undertaken including focus group discussions, key informant interviews, technology surveys, and participatory workshops with adolescents using a range of creative methodologies to document their voices (photowalks, graffiti walls, drawings, clay modelling). Informed consent and assent was given prior to participation, and the study was granted ethical clearance by Makerere University School of Medicine. The full analysis of qualitative data used thematic analysis developed specifically for analysing data generated through applied research. Evidence-based recommendations were designed combining the formative research findings and stakeholder mapping, to improve the design of nutrition-specific and nutrition-sensitive interventions for adolescents, and highlight opportunities for adolescent engagement regarding nutrition in Uganda.

Defining and experiencing adolescence

Adolescence is commonly understood as the life stage between the end of childhood and the beginning of adulthood (Kaplan, 2004). Conceptually, the UN defines adolescence as spanning the age range 10-19 years, although others argue for 10-24 years (Sawyer et al., 2018). Adolescence is a dynamic concept, both culturally and historically. The length, the progression and even the existence of adolescence as an interim life stage differ widely across cultures (Steinberg, 2014).

In Uganda, there is not one standardised definition or age range for adolescence applied across laws and policies, and there are marked disparities between community-level definitions of adolescence and the terminology adopted at the national level. It is clear that conceptually, there is a distinct period of life that marks the transition from childhood to adulthood, although how that transition is defined, what triggers the entrance and exit between life stages, and the terminology used to describe it vary.

Age is rarely used to indicate different life stages at the community level, rather key socio-cultural markers dominate, such as marriage, parenthood and level of household responsibility. Participants confirmed physical change to be a strong marker related to transition between life stages, particularly breast development and the start of menstruation for girls, and deepening voices and the growth of facial hair for boys. Physical changes are also used to signify when a girl is ready for marriage and parenthood. Most adolescent groups explained that their *'thinking capacity'* was superior to that of younger children, but was not yet the level of an adult.

Adolescence was seen as a period of growing responsibilities. In Moroto district, household jobs for adolescent girls included mopping, fetching water, collecting firewood, thatching huts and carrying supplies between the *manyatta* (village) and town, and between the *manyatta* and *kraal* (pasture). Preparing food for the household and looking after younger siblings were core activities emphasised by adolescent girls. Married adolescents and adolescent mothers had similar responsibilities, but cared for their own children rather than their siblings. In Moroto, many women had assumed additional responsibilities as income generators by engaging in paid work outside the home. Household responsibilities had therefore started to shift to eldest daughters, and many confirmed that they often found the level of work and responsibility difficult to manage. In the refugee community, where it was reported that households included an average of 10 children, the responsibility of adolescent girls for their siblings was particularly demanding.

In both Moroto and Adjumani, participants of all ages agreed that girls had more responsibilities than boys. In Adjumani, girls discussed *'needing to work hard'* and to be *'more serious'*, whilst boys spoke about having more time to play with friends despite having some responsibilities. The workload of girls was described as protecting them from *'idleness',* a criticism often levied at adolescent boys in both sites.

'Sometimes when I come home from school, I find all the work is waiting for me, right from looking for the greens to cooking and fetching water. I made the moulding to show that when I get married, I will have my own family'.

13 year old girl, Atedeoi, Moroto

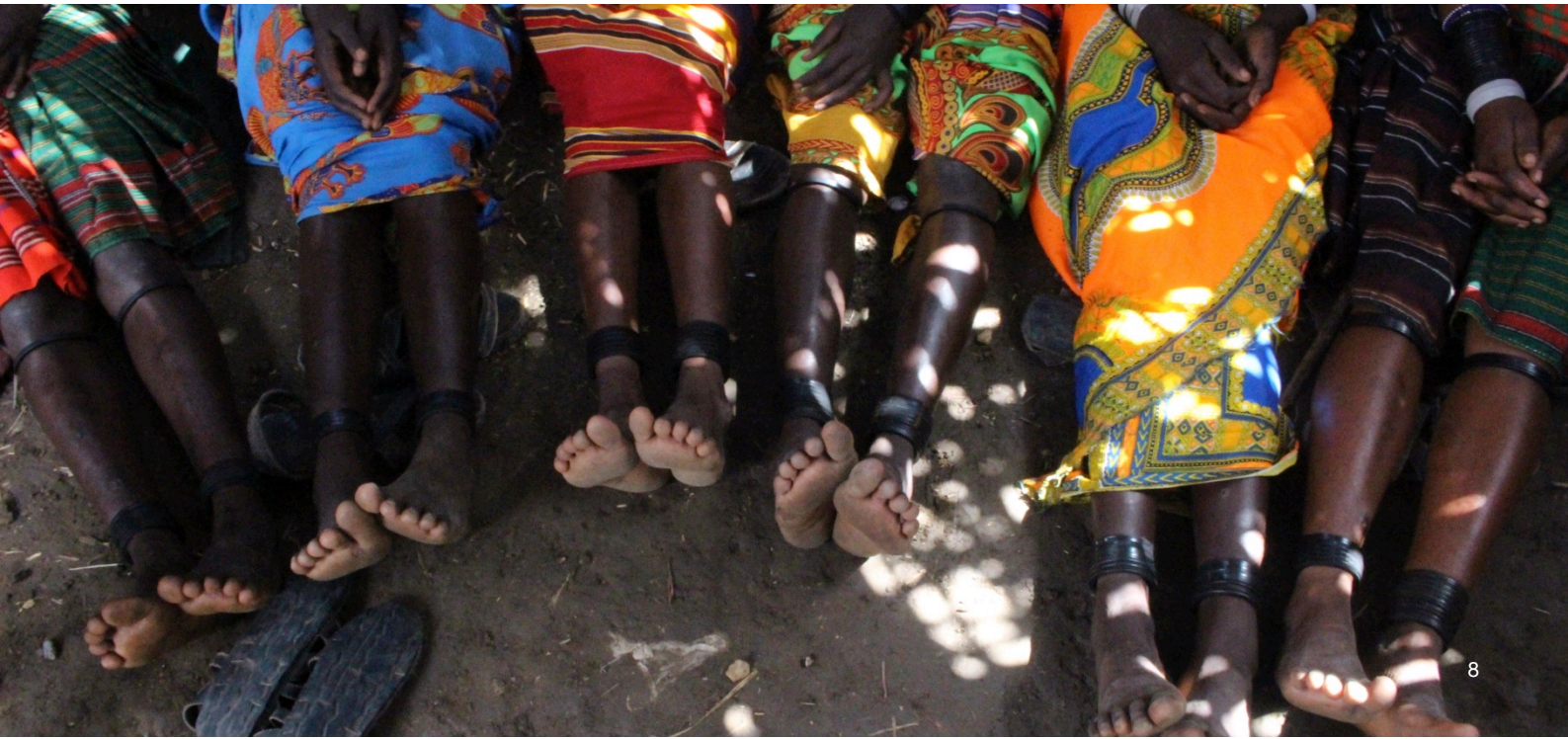
Reliance on parents was described as a marker of childhood, and fostering independence and navigating away from parental reliance was a key component of adolescence. In both sites in Moroto and in the Adjumani host community, peer living practices were commonly described. Boys and girls aged around 14 years begin sleeping communally in a separate building to their family structures. In Moroto specifically, older and younger adolescent girls live in different groups as older adolescents may be visited by '*boyfriends'*. *Nga'kobain,* a term derived from the word *kikob* meaning '*passing something between one-another*', was used by participants to refer to groups of girls who live, eat and sleep together from approximately 14 years old (see photo below). Some participants highlighted that communal living may elevate risk, while several girls explained that it allows them to protect one another from sexual violence (before they get married and move to their husband's household). Sleeping communally was not a practice reported in the refugee community because of the limited land they had available to construct separate spaces. Stakeholders suggested that young refugees lacked opportunities to develop independence and responsibility because of the limitations in resources and freedom particular to their environment.

In general, the interim period between childhood and adulthood is often perceived to be longer for boys than for girls, as girls are likely to assume household responsibilities, marry, and bear children at an earlier age than boys. Yet, markers of adulthood are often identified in both girls and boys considerably younger than 18 years old, the legal age of majority in Uganda.

For the refugee population in Adjumani, a number of traditional initiation ceremonies signal adulthood. Among the Dinka and Nuer, the *gaar* initiation rite signals adulthood for boys, involving the scarification of contour lines on a boy's forehead (6 lines for the Nuer, 4-9 lines for Dinka). Dinka boys and girls may also have their lower teeth removed to signal adulthood. Amongst young men in the host Madi community in Adjumani, traditional markers for entrance to adulthood include wrestling and hunting. Markers for young women include beginning menstruation and increasing household responsibilities.

In rural Atedeoi, Moroto, a male is considered to be an adult when he gets '*married with cattle'* (i.e., with cattle being transferred as part of the marriage process). Life stages or age sets for boys are divided into junior elders and senior elders. For men to be recognised as a senior elder, they must have gone through the initiation ceremony '*asapan'*, a rite of passage usually performed once per year per clan. Females are considered to be adults when they are married with cattle and have given birth to a child. It was widely agreed that giving birth is an important indicator of adulthood. A woman who is married, but has not yet borne a child, may not be regarded as a full and active adult, regardless of her age.

It is worth noting, however, that the conceptual juxtaposition of markers of adolescence can impede effective and efficient programme implementation. Some adolescents exclude themselves from services aimed at youth and/or adolescents as they self-identify as adults, (e.g. because they had their own child), despite being in the 10-19 age group.



Food and nutrition

Available food and food sources

Across the research sites, adolescents were exposed to different foodstuffs and sourced food in different ways.

Moroto is an agro-pastoral zone. Crops typically grown included sorghum, greens, sunflowers, and, less commonly, maize, beans and cowpeas. Foodstuffs originating from livestock included meat, milk and blood that were usually more readily available in the *kraal* where food options may be more varied. In the *manyatta* and town, there was little choice. The community purchased flour, beans, oil, rice and some vegetables from the market, but because of households' limited financial resources, the cheapest goods were most commonly bought and consumed. The other main source of food, for school attendees, was school meals provided by WFP and supplemented by produce from small school gardens

'Here, we are eating the same food, in the morning, in the evening, tomorrow also. Every day, the same food'.

17 year old boy, Mungula, Adjumani

In reporting their typical diet, adolescents most commonly described eating a meal of green vegetables, boiled or cooked with onions, tomatoes and oil; *posho,* a mix of sorghum flour, water and oil cooked into a thick paste; and beans if they have been harvested, or, if they can be afforded, bought in the market. Adolescents based in Atedeoi and Katanga had reduced access to animal products and greater access to starchy staples, with the opposite trend observed in the *kraal* areas where animals were kept to pasture. At the time of data collection, however, Moroto was experiencing significant food insecurity, and as one participant emphasised, '*now everyone is crying of hunger, hunger is everywhere*'.

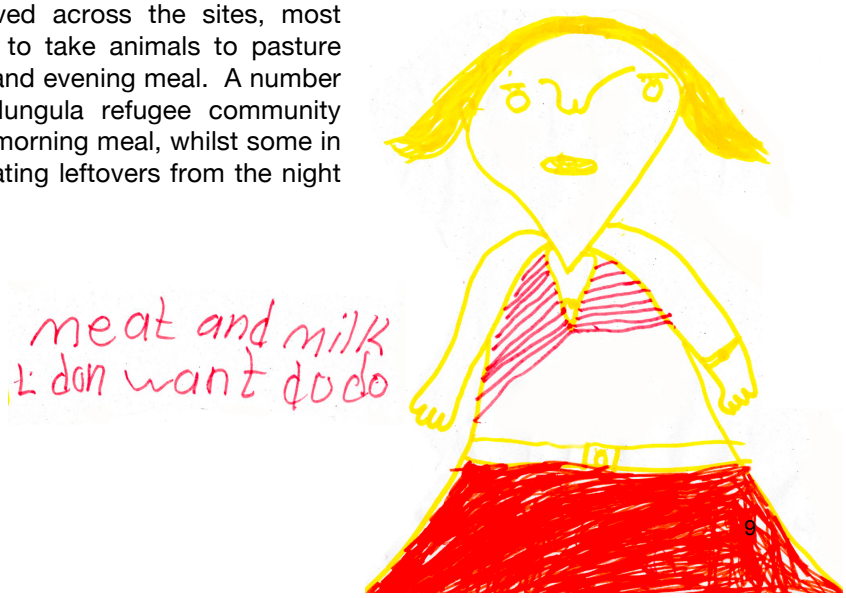
In Adjumani, amongst the refugee community in Mungula, sources of food included rations provided by external stakeholders, land (both private land and school gardens), livestock, and the market. During the time of data collection, the content of rations supplied to refugees in Mungula included oil, beans, maize and sorghum. Because of the scale of the operation, rations needed to be uniform and cost effective, but adolescents confirmed the diet to be limited.

Whereas rations were the primary source of food for refugees, the land (which in Mungula was generally considered fertile and productive) was the primary source for the host community. Those with enough land could produce cassava, beans, cowpeas and other crops including maize, which they could sell to buy rice, meat and fish. As such, food options for the host community were more varied, and in discussing their diets, adolescents in Adjumani focused more on vegetables and fruits than those in Moroto.

Differences in meal patterns were also observed across the sites, most notably in the *kraal* in Moroto where the need to take animals to pasture during the day placed emphasis on the morning and evening meal. A number of adolescents in both Moroto and in the Mungula refugee community reported that they often had nothing to eat for a morning meal, whilst some in both Atedeoi and Katanga (Moroto) described eating leftovers from the night before for their breakfast.

In describing her food preferences during a workshop in Moroto, a participant drew herself to protest, '*I don't want dodo* [leafy green vegetable], *I want meat and milk'.*

12 year old girl, Atedeoi, Moroto



Food responsibilities

'Even at night, when I'm sleeping, I don't have peace. I sleep while thinking what the family will eat the next day. So I wake up at 4am to go for firewood just to make sure the younger children have something to eat'.

17 year old girl, Atedeoi, Moroto

Adolescents played a key role in sourcing and preparing food for themselves and their households. Across the fieldsites, male household heads maintained control over how household resources were spent, whilst the mother or main female caregiver was responsible for sourcing food and preparing meals. As one stakeholder concluded, '*what is to be eaten, if there food at home, is left to women, men don't consider it an important aspect'*. In Moroto, adolescent boys were more involved in herding and milking animals and in extracting blood for consumption. Sourcing food and carrying foodstuffs between the *manyatta* and *kraal* was the responsibility of adolescent girls, most often carrying milk from the *kraal* to the *manyatta*, and sorghum flour from the *manyatta* back again. The burden of responsibility, particularly for younger siblings, was felt sharply by older adolescent girls in both rural and peri-urban sites in Moroto. It was common for the eldest girl in the family to prepare the food, overseen by their mother or female caregivers, a duty frequently depicted in the drawings made by adolescents during their participatory workshops.

Amongst the refugee community in Adjumani, rations were primarily distributed by external stakeholders (e.g. international organisations including WFP), although with a move to provide cash instead of food, programme implementers hoped to shift agency to the community. At the household level, the mother or main female caregiver was likely to decide what to buy, whilst adolescent girls would be sent to market to actually purchase food. The majority of the cooking was carried out by women and girls, and for child-headed households, the responsibility for food sourcing and preparation fell to the eldest girl.

Food preferences and aspirations

In Moroto, the limited availability of food meant that choice was rare, and many adolescents suggested that they could not risk expressing a preference for different foods but rather had to focus on sourcing any food. As one adolescent girl explained, *'every day we eat greens and posho. It's entirely dependent on availability of food, or availability of money to buy food'.* The only desired food items were additions to the routine diet, such as tomatoes, onions and cooking oil to give the green vegetables a *'nice taste'* and beans for added protein. A number of *'treats'* were mentioned by adolescents and their caregivers, including *mandazis (*fried dough), sweets and cakes, but these were more accessible in peri-urban Katanga, close to the trading centre. Livestock represented more than a food source in Moroto, and ownership was a powerful symbol of status. Older adolescent boys who were based in the *manyatta* in order to attend school expressed nostalgia for herding animals in the *kraal*. Their lack of access to animal produce such as meat and milk was keenly felt by many *manyatta*-based adolescents who perceived them to be the most nutritious and *'energy-giving*' foods.

In Mungula, Adjumani, adolescent refugees expressed preference for '*traditional'* foods according to their cultural backgrounds. Whilst they suggested that '*traditional'* food and meat gave the most energy, they also expressed nostalgia for their homeland through their food preferences. Adolescent refugees were vocal in their dislike of the food they ate regularly, particularly staple green vegetables, because they were *'boring'.* As one adolescent boy concluded, '*now we are eating these things by force which are not in our heart*'. In general, adolescents from the host community expressed a wider vocabulary for their preferred foods. Older boys desired food that gave them energy and kept them '*strong'* and able to perform their hard physical duties, particularly digging the land. Adolescents from the host community expressed great emotional attachment to their land, and digging was commonly documented in both drawings and photowalks. The land was perceived not only as a source of food, but also in terms of its income-generating potential so that more varied foods could be purchased and households had resources for school fees. Participants (both adolescent and adult) expressed great respect for the land and an appreciation of what it could offer. As one adolescent girl from the host community explained, *'you get a lot of food when you dig'.*

Factors affecting adolescent nutrition

Seven interrelated themes were found to influence adolescents' access to adequate and healthy food: climate and agricultural practices; household economy and income generation; alcohol; social norms; sexual and reproductive health; access to education; and service provision.

Climate and agricultural practices

A picture of thirst
- Atedoi, Moroto District.

Across Moroto, both adolescents and adult participants reported that the recent lack of rain had significantly affected harvest yield, resulting in less food being available. Poor weather had also resulted in communities having to use more distant *kraals* to graze their livestock, which removed animals as a source of food from the *manyattas.* The lack of available water and pasture had also led to elevated rates of animal death. Not only did this reduce availability of meat and animal products, but it also reduced household assets at the very time that families needed to sell livestock to buy foodstuffs from market. In their photowalk activities, adolescents in Moroto documented the poor harvest, taking photographs of barren land and empty granaries. In Atedeoi, they highlighted the impact on their livestock, and as one girl explained, '*my photo is a picture of thirst. The animals are hungry and struggling to look for grass since the ground is bare and [they] have no water for drinking'.* In Moroto, participants also reported ineffective post-harvest handling practices during times of good yield, with people likely to sell their produce immediately rather than store it. The resulting glut on the market could lead to exploitation by middlemen who bought produce locally at depressed prices, only to re-sell it to larger businesses at inflated rates. In Moroto, concern about rising food prices was the most common explanation for participants using village savings and loans association (VSLA) schemes.

Boy digging -
Host Community, Mungula, Adjumani District

In Adjumani, host community members who had land also described insufficient rains affecting their crop yield, although to a lesser degree than in Moroto. In Adjumani, poor post-harvest storage was also raised by adolescents, who reported that it was compounded by lack of seeds and farming tools, and limited knowledge about farming methods, including irrigation and crop rotation. In their photowalk activities, adolescent girls in Adjumani documented pest infestations such as army worm, described by caregivers as being a '*disaster*' for their crops. One of the main issues emphasised by participants in Adjumani was land ownership and access. With the rapid influx of refugees due to the escalating conflict in South Sudan, programme implementers in Adjumani Town reported being *'overwhelmed by the number of refugees in the area'.* With limited funding, programmes had been forced to cut rations, and the size of allocated rations was a concern prioritised by adolescents in Mungula, Adjumani. Participants from the refugee community explained that the plots of land they were allowed to rent were too small to produce sufficient food to supplement rations. It was notable that adolescent girls chose to document this in their photowalk. In addition to the limited size of the plots, adolescents reported that landlords often reclaimed their land when it had been prepared for harvest or was yielding produce, or asked for payment for the land loaned. Similar issues were also raised by adolescents from the host community.

Household economy and income generation

Many adolescents across the fieldsites were engaged in income-generating activities and made key contributions to their household economy (discussed in relation to school attendance below). Because of their age, however, employment was usually informal and often led to exploitation and elevated risk. In Uganda, the Employment Act provides clear guidance on what constitutes child labour and the conditions under which individuals aged 14-17 years may engage in gainful employment without infringing their rights or putting their lives and health at risk (MOGLSD, 2006).

In Moroto, children aged seven years onwards were described as critical income generators and undertook activities that included open-cast gold mining, stone quarrying, agricultural day-labour, brewing alcohol, cutting firewood and making charcoal (cutting and burning branches and then chopping them into small pieces). Participants discussed such income-generating activities synonymously with household responsibilities, highlighting the expectation that children and adolescents had to work. As a school teacher in Katanga explained, *'these children are used for survival purposes'.* Adolescent girls used their photowalks to document their participation in the labour market, work described as both dangerous and physically exhausting. Cracking rocks in the stone quarries required substantial physical exertion and could lead to significant injuries including broken bones. In describing how they made charcoal, girls explained they had to walk up to 50km to sell it in town, and many expressed concern that such activities negatively impacted the environment.

> *'It's very difficult to carry firewood and charcoal, and it's really a long distance. Also, during charcoal burning, we are exposed to very high temperatures, especially when getting charcoal from the burning pit. Yet, at the same time, we are supposed to provide for our family's needs'.*
>
> 12 year old girl, Atedeoi, Moroto

Many of the income-generating activities were conducted by adolescent girls, reportedly because they grow faster than boys, and because the tasks fit with traditional female roles of carrying and transporting goods. Several of the girls who participated in the study were direct caregivers for their younger siblings and felt responsible to feed their families. Boys in Atedeoi, Moroto, engaged in activities including agricultural day labour, construction work and loading trucks at the stone quarries, but in general, fewer jobs were available to them (except in the *kraal* herding animals). This was keenly felt by older adolescent boys who described themselves as *'being idle and just watching the sun moving'.*

In peri-urban Katanga, adolescent girls engaged in washing plates and clothes or babysitting, or acted as '*house-girls'* for wealthier families in town, which could sometimes lead to sexual exploitation. Whereas babysitting was predominately seen as a job for younger unmarried girls, quarrying and selling alcohol, firewood and charcoal were seen as appropriate for both unmarried and married girls. Older adolescent boys in Katanga had more income-generating opportunities than their counterparts in Atedeoi, including cooking and selling of street foods, labouring on construction sites, crushing rocks or aggregates and driving motorbike taxis (*bodabodas*). Still, many boys expressed frustration that they felt a high level of responsibility to provide for their families, but few opportunities to do so because of their age. As one boy concluded, '*sometimes they tell us you are still young you can't do this, so providing for the family becomes a big challenge'.*

In Adjumani, agricultural work was the main income-generating activity of adolescent girls and boys of all ages, and from both the host and refugee communities. Again, there was a perception that engaging in these activities was a household chore or duty rather than child labour, but the physical expenditure could be extreme. Adolescents reported digging to pay for food (see photowalk image above), but noted that the activity itself made one hungrier. As one adolescent refugee boy described, *'here in Uganda, you can only think to go and dig at someone garden to get money. But as you dig you become hungry, so you eat the money'.* Within the refugee group, unaccompanied adolescent refugees looking after siblings were more likely to be involved income-generating activities, and although some reported receiving financial support from family in South Sudan, this was not always sufficient.

Across the fieldsites, lack of household resources was raised as a significant barrier to the purchase of food. It was also clear that because of the intense physical exertion required in many of their income-generating activities, adolescents were unlikely to make sufficient money to purchase enough food to balance the energy deficit.

Alcohol

'Sometimes we sleep hungry or only with [alcohol] *residue, until again you go back to school, where you* eat'.

12 year old boy, Katanga, Moroto

In both sites, alcohol served a number of functions that linked directly to food and nutrition. In Moroto and the host community in Adjumani (but not so markedly in the refugee community), the brewing business revolved around adolescent girls from 15 years old, and was a major source of income. Girls documented brewing and selling alcohol in their participatory workshops and explained, '*selling booze is an alternative livelihood activity since farming is always disappointing'.* In Adjumani, girls from the host community suggested, '*young girls should not brew. The government should encourage people to cultivate and sell their produce in order to get money instead'.* In addition to being a source of income, alcohol was also considered a food source in Moroto. Traditionally, alcohol was restricted to ceremonies and was only consumed by older community members, yet adolescent girls reported drinking one or two cups per day ('*it's like our breakfast*'), and eating the residue from the brewing process *'to fill the stomach*'. Adolescents identified both liquid alcohol and its residue as key components of their diet, although they noted that when animal milk was more available, alcohol consumption was less common. Both girls and boys in Moroto were aware of the negative impact of alcohol and whilst they saw it as a means to generate income, also highlighted that it *'turns people into drunks and stops them from properly supporting their families*'.

Social norms

There was a general agreement across fieldsites that boys eat more than girls. A common narrative amongst male participants was that girls, who do most of the cooking, '*taste*' the food whilst they are preparing it, so eat less during actual meal times. In Moroto, female caregivers described being responsible for dividing the food and deciding who eats what. An adolescent's transition towards independence was reflected in where they ate. Whereas adolescent girls came together to eat, boys moved around to eat at different houses. If a man had many wives, he ensured that food was reserved for his sons in each of his wives' houses. In the host community, the father was said to eat the most, followed by adolescent boys. As adolescent girls explained, '*men usually eat first and they eat without fear'*.

Some eating practices were dependent on role and place. Animal products (meat, milk and blood) were more available to boys tending livestock than to girls or boys in school. When an animal was slaughtered for a ceremony or ritual, the whole community would receive a share, except for the animal's head which was given exclusively to male herders and adult men. A number of traditional food proscriptions were also identified. In the past, for example, pregnant women would have restricted food intake during pregnancy in order to limit their foetus's growth due to fear of a difficult birth. It was reported, however, that such practices and other food taboos were no longer followed due to general food shortages, which meant that in effect, everybody had a restricted diet. As one adolescent girl in Atedeoi concluded, *'is there any food I am not allowed to have? No, any food I find I eat*'.

'I wake up early, at 3am. I go to town to buy the booze [see photograph of girls carrying barrels of alcohol on their heads]*, bring it back and take it to the quarry site. There I start breaking rocks as I sell the booze*'.

12, year old girl, Atedeoi, Moroto

Sexual and reproductive health

Sexual and reproductive health was raised as a central issue that affected adolescents' nutrition status particularly with regards to HIV and adolescent pregnancy as a direct consequence of low contraception uptake, early sexual debut, early marriage and sexual violence. Although the age of consent in Uganda is 18 years, 15% of girls are married by 15 years old, and nearly 50% by 18 years old (UBOS and ICF, 2017). In Moroto, adolescent girls explained that early marriage was often initiated by parents, many of whom regarded girls who were under 18 years to be adults due to their household responsibilities and high degree of self-reliance. The Karamojong are polygamous and bride price is common. In both Moroto and Adjumani, caregivers reported marrying their daughters in order to receive bride price. As one local leader in the Mungula host community explained, *'the parents are offering the girls for wealth because of poverty*'. This was often done regardless of age, and in more rural areas could result in very young girls marrying men over 50 years old. In Adjumani, refugees from separated families were more likely to marry young in order to secure help and support to take care of siblings, and in order to start re-forming their families.

In Uganda, the rate of sexual violence is reported to be 21.9% amongst women aged 15-49 years, with adolescent girls between 15-19 years old being twice as likely as their male counterparts to experience sexual violence (UBOS and ICF, 2017). In Moroto, the older girls in the *Nga'kobain* social goups reported needing to '*move together'* to protect each other from sexual assault. Sexual violence was also identified as a priority issue by adolescent refugee girls in Mungula, Adjumani, often related to the consumption of alcohol. In their participatory workshops, girls concluded that drinking alcohol *'can lead to someone to rape you, but you will not know who raped you when you were drunk. And if you are made pregnant, you will not know who made you pregnant because you were drunk'.*

Adolescent pregnancy rates are 23.6% in Karamoja region (inclusive of Moroto district) and 22.4% in West Nile region (inclusive of Adjumani district), and during the study, community leaders across all sites reported a rise in the number of pregnant girls aged 15 years and older. In Adjumani, caregivers concluded that adolescent pregnancy created a huge burden, and was associated with significant shame and stigma. Home abortions were highlighted by a number of adolescents in Adjumani, who reported adolescent deaths related to secret terminations. Adolescents living with HIV were also identified as a particularly hard-to-reach group. Nationally, the HIV rate amongst adolescents (15-19 years) is 2%, with more girls affected than boys. HIV was identified as a concern in Moroto, but was raised less in Adjumani.

Access to education

School was seen as a protective factor against a number of the threats facing adolescents. In both Moroto and Adjumani, participants observed that attending school delayed pregnancy and marriage for adolescent girls and helped them gain valuable knowledge for self-protection, including how to avoid situations in which they might be vulnerable. Education was also seen as a method of protecting boys from being *'idle'* and *'causing trouble'*.

In Adjumani, '*mixed'* classes (with teachers and pupils coming from both host and refugee communities) were seen by participants to promote cohesion between different ethnic groups. However, education appeared to be more important to the refugee community and adolescent refugees frequently described their '*love for education*'. They expressed pride in being students and saw school attendance as a source of status, whereas adolescents from the host community discussed pride in terms of land, possessions and material assets. Adolescent boys from the refugee community reported that, despite the danger, some of their peers travelled back to South Sudan in order to continue their education.

'Parents give least priority to girls to go to school and most times they see no value in educating girls'.

14 year old girl, Atedeoi, Moroto

Despite these recognised benefits, nationally there is a high dropout rate following primary school and it has been reported that 42% of eligible 13-18 year olds are not in school (MoH et al., 2017). Enrolment is lower in rural than urban areas, and is lower for girls than boys (MoH et al., 2017). In the study sites, a boy's education was generally prioritised over a girl's. Participants suggested that girls who were not in school were more likely to marry earlier, and in Moroto specifically, it was suggested that school attendance could reduce bride price. There was consensus that if a girl became pregnant, she would likely drop out of school because of shame and stigma, but also because it signaled a new stage of greater responsibility and childcare. Whereas other countries in the region (such as Kenya) have policies in place to encourage the re-entry of teenage mothers into education, Uganda does not.

Across all fieldsites, adolescents' attendance at school was dependent on their other responsibilities, including seasonal harvest work. In Adjumani, household duties, notably digging and farming the land, were prioritised. In Moroto, attending school required a young person to be in the *manyatta* rather than taking animals to pasture and living in the *kraal,* and this meant a choice between school and herding animals. In the past, favoured children were retained to herd animals whilst others were sent to school, although this appeared to be less common today due to the reduced number of livestock. Participants saw the opportunity costs of taking time away from income-generating activities in order to attend school as a significant barrier to adolescents' education. Moreover, school fees were a particular obstacle for refugee orphans, directly limiting their participation in the school system.

Vocational training was discussed with enthusiasm by participants in Adjumani as a way to link education more directly with income generation. Emphasis was placed on the need for training in agricultural methods, and adolescents stressed that training should be flexible in order to accommodate their responsibilities, particularly in terms of childcare for adolescent mothers. Adolescents recommended that to make vocational training as effective as possible, '*start-up kits'* and materials should be provided post-training.

Service delivery issues

School was recognised as a direct means to support adolescent nutrition through school feeding programmes. School meal provision was reported as a primary motivator for school attendance in Moroto, and as one teacher asserted, '*if there is no smoke from the kitchen, children will not come to school*'. Another school teacher expressed concern that school was being used as a '*feeding centre',* that children were coming at break-time for food, but then leaving to continue their household duties or income-generating labour. In contrast, the lack of school meals in Adjumani was cited as a reason for non-attendance, absenteeism and drop-out.

Antenatal care (ANC) is a common platform for delivering nutrition services to pregnant women and lactating mothers, although it was suggested that most adolescents in the study areas presented for delivery rather than ANC because they perceived health facilities to be for curative treatment interventions rather than preventative care. Adolescents were also reticent to attend health facilities because of their negative association with HIV and because HIV testing was a routine aspect of ANC care. A key barrier preventing ANC attendance that was noted in Moroto was the belief raised by many adolescents that a woman must be accompanied by a man to attend ANC. Whilst this is not a compulsory policy at national level, it was perceived as such amongst local leadership and the wider community.

Adolescents also highlighted a number of barriers that prevented them from attending health facilities more generally. They described their '*fear*' of having to describe a health issue to medical professionals; of being judged by other community members waiting at the facility; and of rumours around certain procedures. Other key barriers included distance to the facility (particularly from the *kraals* in Moroto); long waiting times; drug shortages and stock-outs; and the lost opportunity to generate income and complete household duties.

The 'Youth Corner' in Moroto Referral Hospital, was reported to offer a package of health services and act as a health resource centre for young people with a focus on sexual reproductive health that included nutrition assessments, education and referral, but not ANC services. During the study, service providers reported a lack of resources to carry out community outreach and confirmed, '*we don't have the resources and logistics to deliver knowledge to adolescents'*. There were no active adolescent/youth friendly services in Adjumani, apart from a tented area in Mungula Health Centre. One local health provider described that with the time and personnel required to provide youth friendly services as per national guidelines, *'is a burden'* on the already over-stretched health system.

In Moroto, it was also suggested that the provision of food supplements to pregnant and lactating women could actually encourage adolescent girls to get pregnant. Some adolescents reported that pregnant girls sold the supplementary rations given to them by the health facilities '*so that they can buy food that the entire family can eat'*.

For the refugee population in Adjumani, the unpredictability of ration supply was also seen to be problematic. Programme implementers agreed that '*communication with communities must be improved. When they are delays in food, it is serious'.* This was particularly important for adolescent girls, who had many responsibilities within the household, largely around food, but often received information last. Adolescent refugees highlighted that rations did not always reach the most in need and suggested corruption in the system. As one boy explained, '*those who say they are vulnerable are given special care by UNHCR, whilst those people who are actually vulnerable, miss out*'. In their participatory workshops, adolescent refugees in Adjumani explained that families would often resort to selling food rations to buy larger quantities of cheaper, lower quality goods.

Engaging adolescents

Understanding how to effectively engage adolescents is essential for assessing how nutrition-specific and nutrition-sensitive interventions can be delivered and best related to other components of the 'adolescence equation'. Throughout the study, adolescents highlighted their priorities and needs related to engagement.

'Come to us, fit around our lifestyles'

Adolescents stressed the importance of accessibility and preferred to be 'reached' in places they already frequented and at convenient times. Interventions must be tailored to fit the often-chaotic lifestyle of adolescents and must recognise their competing priorities.

'Use our groups, don't group us'

Unless interactions were likely to be particularly sensitive (in which case grouping by gender was more appropriate) adolescents expressed preference for being grouped together, including those in refugee and host communities. They did suggest grouping according to age and life stage, however: married girls and young mothers should be engaged separately from unmarried girls (including the *nga'kobain* social groups in Moroto); older boys (including junior elders) separately from younger boys; and some suggested that in-school adolescents should be engaged separately from those who were out-of-school.

'Make it entertaining'

Great importance was attributed to the need for activities to be primarily entertaining, followed by being informative and understandable. The use of music to attract and sustain the attention of adolescents was highlighted. Dance and sports activities were also popular.

'Show us real experiences'

Adolescents confirmed that they found 'real life' stories to be the most engaging and affective way of sharing and learning from experiences.

'Speak our language'

The importance of conversing with adolescents in their local language was stressed. Adolescents highlighted the benefit of tailoring language to fit their colloquialisms. They also stressed the need to be spoken to with respect in order for them to feel comfortable engaging with services and programmatic interventions.

'Ask us, include us'

Adolescents stressed that they wanted to be involved in a participatory manner. They suggested that rather than passive or one-directional methods of conveying information, they wanted to be included in interpersonal activities. This would give them a chance to ask questions and to ensure that their voices were heard and opinions recognised.

'Be fair'

Adolescents stressed that different and multiple modes of engagement may be needed to interact with adolescents, but that all engagement should be transparent. Great value was placed on being fair and avoiding favouritism. The importance of trust and privacy was repeatedly emphasised and adolescents were wary of information or situations they perceived to be discriminatory or associated with corruption. Ensuring equity in both engagement and the provision of services was highlighted as a priority (particularly in terms of interactions between refugee and host communities).

'With food, we need energy now…'

The need to show the immediate benefit of food to secure adolescents' interest was highlighted across the fieldsites. Adolescents reported that having energy was their priority to ensure they could complete their daily workload.

'Build us for the future'

Adolescents wanted engagement activities to '*help [them] see a bright future'* through building skills and interests. They were most receptive to learning when it built on activities they enjoyed and were good at and which prioritised issues they identified to be important. Participants emphasised the importance of engaging adolescents holistically, providing health and nutritional information alongside sexual and reproductive health services, education and vocational training.

Recommendations

Strengthening the visibility of adolescents

- Uganda has a valuable window of opportunity to further develop its enabling environment for adolescent nutrition. To strengthen the evidence base, there is a need to disaggregate available data for adolescents and to systematise routine collection of adolescent-specific data. To complement and supplement routine quantitative data, high quality qualitative data should be collected to better understand the lived realities of adolescents, and the complex root or underlying causes for their nutrition practices and food-related behaviours. At national and sub-national levels, competencies must be developed to analyse, interpret and apply both qualitative and quantitative data.
- The definition of adolescence at the national level is not consistent with definitions used at the community level. This results in some adolescents self-identifying in ways that preclude them being recipients of youth-orientated services. Interventions must be sensitive to variables including age, gender, socio-economic status, life stages, livelihoods and ethnicity. Effective engagement should target groups as defined and understood at the community level.
- The tendency at both policy and programmatic level to group adolescents with 'children', 'youth' or 'women of reproductive age' reduces the visibility of adolescents, hampers the identification of adolescent-specific problems, and limits the development of appropriate strategies and programme design to meet their specific needs. Although it may not be possible to agree on definitions and terminology across all sectors, it is important that measures be taken to prevent adolescents' needs from becoming diluted, or insufficiently addressed. This will require focused advocacy with national stakeholders and partners to ensure their commitment to this age group, regardless of the terminology used.
- Promising policy developments include the Adolescent Health Policy, which includes a detailed section on nutrition, and the Maternal, Infant, Young Child and Nutrition Roadmap, which offers guidance on promotion, prevention and treatment with a focus on multi-sectoral working (both in draft form at the time of writing). The Anemia Policy also specifically highlights adolescent girls. The challenge is to support the effective implementation of these policies, and to advocate for the inclusion of adolescent nutrition across the policy spectrum.

Influencing adolescent nutrition

- When taking adolescents as the central unit of analysis, it becomes clear that this group is uniquely affected in Uganda. Programmes targeting adolescents must take account of the nutritional challenges faced in different contextual settings, and the impact these have on their overall growth, development and wellbeing.
- Increasing communication and information about nutrition alone will not improve the diet or healthy behaviour of adolescents. Rather, interventions should adopt a systems-based approach that addresses the nutritional needs of adolescents in the context of and in combination with other key components of their lives. Communication and information should be combined with improved access to healthy food and other services.
- Reducing poverty by increasing safe income-generation opportunities (and raising household economic status) is key, but such opportunities should be designed around keeping adolescents in school, e.g. scheduling activities for afternoons and weekends. For adolescents who are older or do not attend school, vocational training that develops business skills and provides resources such as start-up equipment is an important avenue of constructive engagement.

- In addressing agricultural practices for adolescents and their households, an agri-nutrition lens should be adopted. Knowledge, skills and resources should be developed for effective and efficient irrigation systems and post-harvest storage, and consideration given to issues of land access. New and emerging urban-agricultural methodologies (e.g. sack-gardens) may be particularly relevant and appealing for adolescents residing in urban and peri-urban localities.
- Addressing adolescent nutrition requires a systems-based approach that considers restrictive social norms, sexual and reproductive health issues including early marriage and teenage pregnancy, and access to education. These are critical components related to improving nutritional status and wellbeing.

Engaging with adolescents

- As target beneficiaries, adolescents should be engaged as active participants in the design, implementation and monitoring of interventions. Programmes should be sensitive to the needs, preferences and priorities of adolescents. During the research, they clearly articulated suggestions that should be operationalised including ease of access, the strategic use of language, and showcasing real experiences. They emphasised the importance of privacy, trust and transparency in all engagements. They wanted interventions to develop their skills for the future, but to be dynamic and entertaining, using music, dance and sport.
- Several key influencers in the lives of adolescents were identified, including caregivers and parents, particularly mothers (for younger adolescents); husbands and mothers-in-law (for married female adolescents); peers (particularly for older adolescents); teachers (for those in-school and particularly refugee communities); and community leaders (for adolescent girls and boys of different ages). Securing their buy-in and support is vital in both generating demand and facilitating utilisation of programmes and services. In line with the strong oral culture in all fieldsites, mentors from the community who could serve as positive role models were also highlighted as key influencers. National level stakeholders agreed that to successfully programme for adolescents, it is critical to work within their '*circles of life*'.
- Adolescents took a high level of responsibility for household food preparation, and can therefore be agents of change regarding healthy eating practices for their family members and broader communities. In addition to receiving information about nutrition and nutrition-related services for their own wellbeing, adolescents should be considered primary targets for cascading knowledge and improving the nutrition of other vulnerable groups (e.g. children under five, pregnant women).
- There is need to support trusted adolescents to assume positions of leadership to represent the voice(s) of their peer group(s), to ensure appropriate user-centred design, and to provide monitoring and evaluation feedback to ensure programmes are appropriate, relevant and effective.

Platforms for engagement

- Considering the dynamic needs of adolescents, there is no 'one size fits all' delivery channel. Interventions should respond to the complex realities of an adolescent's life and rather than being an additional burden, should be mindful of the conflicting responsibilities they may have. Adolescents should be engaged through multiple avenues or platforms that are mutually supportive.
- The formative research and stakeholder mapping documented existing programmes that engaged adolescents and implemented activities related to nutrition; sexual reproductive health, including HIV; economic empowerment, livelihood support and life-skills training; education; school health and nutrition; and nutritional supplementation. There was a particular bias towards girl-centred programming and sexual reproductive health and HIV programming. Overall, however, programmes were not implemented at scale and

coverage was limited. Only a few programmes were designed with 'adolescents' (defined as 10-19 year olds) as the primary beneficiary.

- Adolescents discussed their preference for being engaged at informal community spaces, through clubs and groups with peers and with a strong support/mentoring component. At the national level, platforms and 'safe spaces' have also been highlighted in adolescent livelihood projects that combine life-skills training with economic empowerment (see also Amin, 2011, and Austrian and Muthengi, 2014). Other innovative platforms that were highlighted included Farmer Field Schools (interactive agricultural training) and Wellness Visits (health worker extension visits to primary schools).
- A number of adolescents suggested engagement through religious institutions, although practices varied even within the same district. This is an area that requires further research. If religious institutions are to be engaged, it will be important to form a strong alliance with the Inter-Religious Council of Uganda at the national level, particularly given their influential role in cross-sectoral policy decisions. It is challenging, however, for religious institutions to actively tackle sexual and reproductive health and family planning related issues, and this may limit the potential impact of the church as a delivery channel.
- For adolescents in formal education, school was identified as a positive and trusted platform for engagement, although it was noted to be a highly selective channel given that many adolescents do not regularly attend school (such as adolescents at the *kraal* in Moroto).
- Technology platforms are a promising way to engage adolescents, yet the research provided further evidence that the penetration and use of technology is highly context-specific, and differs according to social groups, age and gender. Mobile phones were only rarely accessed by peri-urban adolescents in Moroto and host community adolescents in Adjumani, and even then, only infrequently. Radio was the most commonly used media and was popular across the fieldsites, although access appeared lower for adolescent girls than boys. Programme implementers suggested that, in order to increase the effectiveness of community radio, adolescents should be involved in the design of programme content, and strategies such as 'listening groups' (in which people are brought together to listen and then discuss programmes) should be established. Both host and refugee communities in Mungula were more engaged and interested in using the internet and social media than participants in Moroto, although again access was limited. In Moroto, it was notable that many adolescents had never heard of the internet. Local leaders in both sites spoke negatively about the *'rapid influence of Western culture'* on the adolescent age group. This highlighted the importance of negotiating the use of new technologies with parents, caregivers and other gatekeepers, particularly if girls and younger adolescents are the target group for social media-based interventions.

Entry points for strategic partnerships

- As the coordinating body for the Uganda Multisectoral Nutrition Policy, the Office of the Prime Minister is key to driving the adolescent nutrition agenda forwards. The ministries of Health and Agriculture are mandated to address nutrition, and they should be supported to help mainstream nutrition-sensitive and nutrition-specific activities. Similarly, the Ministry of Gender, Labour and Social Development is key, particularly given the newly developed National Multisectoral Framework for Adolescent Girls policy document (in draft at the time of writing). Actors already engaging adolescents in other sectors should be encouraged to include nutrition in their activities.
- Services aimed at women of reproductive age should purposefully try to reach all adolescents and services aimed at pregnant women should ensure that pregnant adolescents are effectively included. By advocating for the adoption of a youth-friendly approach, adolescents could be engaged in ways and through channels that they have suggested and prioritised. Services must be presented in a way that helps adolescents see them as directly relevant and inclusive, particularly in terms of preventative as well as treatment-orientated services. Engaging adolescents when they are younger (e.g. 10-14 years) is important. Normalising health facility visits for this age group can reduce stigma

related to attendance and will help move away from the negative association between health facility attendance and sexual reproductive health issues.

- Expanding school feeding programmes to further include adolescents may be a positive driver to encourage adolescents to maintain school attendance and benefit from the protective capacity of the education system for longer, delaying early pregnancy and marriage, with the resulting positive impact on nutrition. Structural weaknesses inherent in the school system, including storage facilities for food products, and poor access to water and sanitation, need to be simultaneously addressed. In Moroto, the provision of school meals attracts children and adolescents who are not registered at school, and there is need to build the value of school beyond it being a '*feeding centre*' to encourage regular attendance. Flexible education structures that allow children and adolescents to continue to contribute to herding activities and other responsibilities should be further explored. In Adjumani, school feeding programmes that incorporate agricultural learning (e.g. through school gardens), may be a positive driver to encourage and maintain attendance.
- The food industry should be positively engaged to ensure low-cost and healthy food is produced and sold, and to influence market trends towards the recognition and consumption of food that is healthy and has a high nutrient value. The Scaling Up Nutrition (SUN) business network could be strengthened and with apex bodies such as the Private Sector Foundation, could serve as effective entry points to develop strategic partnerships with the private sector.

Summary of key policy and programme implications

Theme	Key considerations
Available food and food sources	• Make diverse, healthy, natural and affordable foods available and attractive to adolescents and their families, particularly in times of scarcity. • Production of a variety of foodstuffs should be encouraged, alongside pastoralist practices as appropriate. This should include improved irrigation, better management of food and harvest losses, and social protection via cash transfers.
Food responsibilities	• Because adolescents have high levels of responsibility for their own and their families' nutrition, particularly that of their younger siblings, it is important to target messaging aimed at benefitting other vulnerable groups (e.g. children under five years old) towards adolescents. • Household decision-makers and 'financial controllers' should be engaged so they allow and actively encourage healthier food options to be priority purchases. • Amongst the refugee communities, messaging regarding food rations and cash payments should be targetted towards adolescents.
Food preferences	• The promotion of healthy foods should focus on components adolescents value in terms of choice and consumption, primarily that they are energy-giving, filling and tasty. Incentivising adolescents to choose healthy food and adopt healthy food practices should be linked to positive identity markers and social status. • When novel and fast food enters the market, avenues should be developed for promoting traditional and healthy food that align with adolescent aspirations.
Climate and agricultural practices	• Recognising the ramifications of climate stress on adolescent health and nutrition and how it affects their education and future employment is critical. Humanitarian assistance linked to drought and food insecurities should purposively consider adolescent issues and constraints and the role of adolescents in household and societal structures. • Poverty is widespread and exacerbated by climate change-induced vulnerabilities. Policies invoking the activation of social safety nets and food assistance should be strongly linked to drought, and should purposively consider adolescent issues and constraints. • There is a need for more resilience work that better protects livestock and livestock-feeding areas in the event of a drought. Livestock and crop insurance systems could also be considered. • If rations are to be supplemented by household crops, then land rights for refugees is an important issue that urgently requires greater understanding and advocacy.
Household economy and income generation	• Income-generating activities are often prioritised over school attendance, and adolescents and their families need strong incentives for this age group to continue formal education. Social protection mechanisms such as cash transfers may help address poverty and underlying issues that result in families sending their adolescents to work. • Many of the income-generating activities adolescents engage in require a high level of energy expenditure and are exploitative. Safe income-generation opportunities should be made available but designed around keeping adolescents in school, e.g. scheduled for afternoons and weekends. • For older/out-of-school adolescents, vocational training that develops business skills and provides resources for start-up equipment is a key avenue for constructive engagement.
Alcohol	• Alternative income-generation opportunities should be made available to families to deter their reliance on the production and consumption of locally brewed alcohol.

	Social norms	• Knowledge of healthy food does not directly translate to healthy food practices, so investment should be made to ensure adolescents assume healthy diets and consumption patterns. This is linked to making healthy food not only available and accessible, but also aspirational and attractive. Interventions that focus on food and meal preparation may be helpful. • Ingrained gender norms related to food allocation within the household prevent girls' healthy nutrition. Raising awareness about the importance of an adolescent girl's nutrition should focus on her strength and role in the (household) economy (in terms of immediate value) and on the importance of her health for the next generation (in terms of future value). • Engaging with key male and adult influencers is critical.
	Sexual and reproductive health	• Reducing adolescent pregnancy and HIV is key in ensuring the healthy development of adolescent girls, and is linked with poverty reduction and education promotion efforts that have been proven to have a positive impact on adolescent nutrition and broader wellbeing. • The risks of early marriage and pregnancy should be discussed in community forums and the benefits of delayed marriage and pregnancy advocated for. • Raising awareness around good nutrition during pregnancy is needed. In parallel, initiatives should improve antenatal care, delivery practices and postnatal care. Delivery with skilled attendance should be actively promoted. • Greater awareness is needed around the problems of sexual violence against adolescent girls. Adolescent girls should be empowered to protect themselves (e.g. through personal protection skills and self-defense) and perpetrators should be brought to appropriate justice.
	Access to education	• The value of adolescent education should be promoted through community-based role models and linked to attractive incentive structures for adolescents and their wider family unit. To help facilitate school attendance, it is important to explore ways to reduce income-generation activities and housework / household responsibilities of both boys and girls. Subsidising informal fees for poorer families could be considered. • Menstrual management support should be considered as this could improve school attendance rates for adolescent girls.
	Service delivery issues	• Health facility services should actively try to reach adolescents and sustain engagement. Services should be carefully designed to ensure this age group perceives them to be relevant. Normalising health facility visits for preventative care is important and should aim to shift association away from sexual and reproductive health and HIV issues. In parallel, the provision of quality care for adolescents must be further strengthened and an appreciation for preventative services developed. • Outreach visits to the community can be beneficial in overcoming stigma associated with facility attendance and to 'build bridges' between facilities, services and adolescents. • The quality and delivery of school meals need to be improved, including consistency in availability, nutritional value and portion size. Consideration should be given to alloting school meals to non-registered children. • Expanding school meal programmes to include adolescents at secondary-school level may be a positive driver to keep this target group in school, although for this to be effective, the perceived value of adolescent education must be built at the community level. • Structural weaknesses in the school system (storage, WASH, workload of teachers etc) need to be overcome if schools are to be an effective delivery platform. Despite the potential value of school as a platform for sustained engagement, it must be recognised that schools do not reach all adolescents or the most vulnerable, and interventions must therefore be combined with engagement channels that can reach out-of-school adolescents, including mature minors.

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