

Formative research to inform adolescent programming in Kenya

Engagement for health, nutrition and sustainable development

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Anthrologica

Foreword

Globally and at country level, adolescents represent a major demographic force. In Kenya, adolescents constitute 22% of the total population. As would be expected for a large population, adolescents are extremely diverse: they differ in culture, income status, urban/rural residency, education, family and household composition and many other ways which can have a great impact on their health and wellbeing. Their influence on intergenerational health and nutrition is now being recognised, with calls for increased investment and attention in adolescent health and well-being. Sustainable Development Goal 2.2 targets ending all forms of malnutrition, including addressing the nutritional needs of adolescent girls.

The study found that while there might be significant knowledge among adolescents on the elements of a healthy diet, practicing a healthy diet is a challenge in households with socio-economic issues. Many adolescents are engaged in income generating activities to cover their food requirements and those of their households. Social norms and restrictive food practices can hamper access to adequate nutrition.

The Kenya study highlights how critical it is to effectively engage adolescents to realise results. Reaching adolescents can be tricky: adolescents prefer modern technologies and 'entertaining means of communication' to sustain their interest. Adolescent girls may not be willing to participate in adolescent targeted programmes if they are married or young mothers, because they no longer perceive themselves to be adolescents. How they are defined at national and local levels are very different.

This kind of information is critical for the successful design and delivery of nutrition interventions, as well as an understanding of potential linkages with other key areas such as improved school attendance, broad adolescent health services, delaying early marriage and pregnancy, and livelihood skills. Health and nutrition interventions that are properly tailored to reach adolescents and which engage adolescents in all stages – from design, delivery and monitoring will contribute to the realisation of Universal Health Care and improved nutrition – two of the government's 'Big Four Priorities' for development in 2018 -2022.

The World Food Programme recognises the need to support the Government of Kenya address the needs of adolescents as an investment in the current and future Kenyan population, particularly through health, nutrition, education and economic empowerment, ultimately contributing to the vision 2030 goal of improving the quality of life for all Kenyans.

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This report documents formative research conducted in Kenya as part of a multi-country study to inform adolescent engagement and programming for health, nutrition and sustainable development. A concise report summarising key findings and recommendations has also been produced, and a database of stakeholders working with adolescents. A report synthesising core learning across the four countries included in the project (Cambodia, Guatemala, Kenya and Uganda) was launched at the World Health Assembly in 2018.

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Executive summary

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 Kenya. Adolescents (10-19 years) make up 22% of the population (UNICEF, 2014). It has been reported that 18% of girls aged 15-19 years have begun childbearing (KNBS, 2015) and over 25% of all new HIV infections are in adolescents and youth, with girls more at risk than boys (Kenya HIV Estimates, 2014). The ratio of secondary school attendance is significantly lower than that of primary school (MOEST, 2014) with girls more likely to dropout owing to factors including pregnancy, early marriage and poverty. This age group is also exposed to sexual and physical violence, substance abuse and social marginalisation.

Recent policy developments have been promising, and Kenya's Vision 2030 places young people including adolescents, at the centre of the country's development agenda. The Neonatal, Child and Adolescent Health Policy (2017) and the Food Security and Nutrition Policy (2011) both highlight specific interventions for improving adolescent nutrition, and nutrition is one of eight key pillars in the National School Health Policy (2017). Whilst adolescent-specific and -sensitive policies are numerous and cross-sectoral, it is difficult to ascertain the extent to which they have been operationalised or their impact.

In Kenya food insecurity is a persistent problem, resulting from regular droughts and other factors linked to climate change; high costs for national food production; and the fact that nearly half of the population lives in poverty (USAID, 2014; Kabubo-Mariara, 2015). At the same time, a nutritional transition is occurring in both rural and urban settings (Keding, 2016). The food system is changing and supermarkets are becoming increasingly prevalent and popular, which is a primary determinant of the Kenyan nutritional transition (Rischke et al., 2015). Levels of obesity are linked to dependency on low-cost, high calorie, low-nutrient dense foods, and changes in energy expenditure.

Kenya's nutrition situation is characterised by high levels of stunting and micronutrient deficiencies, and increasing prevalence of overweight and obesity (Kenya National Micronutrient Survey, 2011; KNBS, 2015; Kimani-Murage et al., 2014). According to the Kenyan Demographic Health Survey (KDHS) the rate of stunting in children under five is 26.0% (KNBS, 2015), whilst adults are more likely to be overweight and obese than underweight. The KDHS reports that 26% of rural-dwelling women, and 43% of urban-dwelling women of reproductive age are either overweight or obese, compared to 11.2% and 5.5%, respectively, who were thin (KNBS, 2015). This dual burden points to the salience of adolescence as a period of transition in nutritional status. Although data on adolescents from the Kenya National Micronutrient Survey (2011) indicate concerning rates of anemia and iron, zinc, vitamin B12 and folate deficiencies (see also National Malaria Control Programme, 2016), research exploring the nutritional status of Kenyan adolescents remains limited.

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 Uganda. The research has four overall objectives:

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

Methodology

The mixed-methods, collaborative study was conducted between March and December 2017. A country landscape analysis of adolescent programming recorded 47 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 three counties: Nairobi, Samburu and Meru. In Nairobi, fieldwork was conducted in Ngomongo (informal urban settlement) and Utalii (urban); in Samburu, in Ndoto (rural pastoralist); and in Meru, in Mikinduri and Maua (rural agriculturalist). 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). Informed consent and assent was given prior to participation, and the study was granted ethical clearance by Kenya Medical Research Institute (KEMRI). The full analysis of qualitative data used thematic analysis developed specifically for analysing data generated through applied research. Although not generalisable across the whole of the country, findings are likely applicable to areas and populations with similar socio-economic characteristics. Evidence-based recommendations were designed combining the formative research findings and stakeholder mapping, to improve nutrition-specific and nutrition-sensitive interventions for adolescents, and highlight opportunities for adolescent engagement regarding nutrition in Kenya.

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 Kenya, there is not one standard 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 circumcision, marriage and parenthood. Both adults and adolescents across research sites identified adolescence as a period of physical and cognitive growth, with adolescents developing capacity *'to think'*, becoming *'aware of many things'*, and being more interested in material assets. Adolescents are also seen to assume greater personal agency to make independent decisions, whilst assuming a higher-level of responsibility, particularly in relation to taking care of younger siblings. During adolescence, however, the paths of girls and boys diverge, with boys' mobility expanding, whilst, in general, girls' social circles constrict. Boys are perceived to have a longer interim period between childhood and adulthood than girls, but markers of adulthood are often identified in both girls and boys considerably younger than 18 years old, the legal age of majority in Kenya.

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 adult, despite being in the 10-19 age group.

Food and Nutrition

Available food and food sources

Across the three sites, adolescents were exposed to different foodstuffs and sourced food in different ways, but in general, their diets were limited in quantity, diversity and overall quality.

Informal work and *'hustling'* was described a common practice in Nairobi, particularly in the informal settlement of Ngomongo. There, the culture of food reflects the hustling lifestyle: disorganised, uncertain and unregulated. When describing the foods available to them, adolescents simply stated, *'all the rejects are sold here'*. Commonly eaten foods included *anyona*, the off-cuts of factory bread that are bagged and sold on the roadside; *chafua*, meaning *'dirty'*, a soup made from the juice of beans; and collard greens or *sukuma wiki*, which means *'push the week'* due to their cheap price and ability to keep families fed when money for food is scarce. Food was described as the largest

expenditure of household income in Nairobi. As a religious leader in Ngomongo asserted, '*although you're working hard, whatever you earn you spend on food*'. In both Ngomongo and Utalii, all household members, including adolescents, bought a large proportion of their food from roadside stalls, and only a few dishes were described as being '*truly home-cooked*'. Adolescents in Ngomongo also described the common practice of scavenging dumpsite food from as young as eight years old, trading hygiene and personal safety to acquire food (see graphic below). Having found food, adolescent girls reported, '*we don't wash it, we just wipe it*', asserting that they rarely became ill because '*our stomachs have adapted to it*'.

In Ndoto, Samburu, food could be purchased from markets and the trading centre but the major food source was the community's livestock (cattle and goats), although herds were seriously depleted at the time of the study (discussed further below). Beans were also referenced as a source of protein, with eggs available to the small number of families who kept chickens. Meat was rarely consumed, although ceremonies such as circumcision and marriage that were held a few times per year were viewed as occasions when everyone, regardless of personal wealth, could eat meat. The daily diet suggested an overconsumption of certain food groups such as starchy carbohydrates like *lochoro*, a mixture of flour and water. Adolescents described the monotony of their diets, which they were '*bored*' with.

In Meru, the majority of foodstuffs in both Mikinduri and Maua were purchased from the local market. Crops included bananas, maize, beans, cowpeas and peanuts, and in Maua, the primary crop was *miraa* (khat), a plant whose leaves are chewed for their stimulant effect. The majority of the produce was grown to be sold, but if feasible, a small portion of land would be reserved to produce staple foods for the household. Adolescents engaged in work were sometimes provided with food by their employers (for example, on construction sites), and if they had money, they also bought food from '*cafes or hotels*' (restaurants).

Adolescents in Nairobi had greater access to roadside and pre-prepared foods, whereas adolescents in Meru reported wider access to a range of vegetables and fruits and nuts, but also to shop-bought snacks, which were perhaps less affordable to the communities residing in informal settlements in Nairobi. Adolescents in Samburu had the most limited range of food options, relying mainly on the staple *lochoro* and limited protein in the form of beans and animal products. Adolescents in Ngomongo, Nairobi and in Ndoto, Samburu reported going without food in the morning and also, at times, without a mid-day meal. Those herding animals in Samburu were more likely to have a morning and evening meal but had the smallest range of food options during the day.

Food responsibilities

Adolescents played a key role sourcing and preparing food for their household and were often responsible for their own food consumption. In all three fieldsites, the mother or main female caregiver was responsible for sourcing food and preparing meals. The male household head, if still living with the family, was responsible for providing the money to purchase the food, but increasingly, women have assumed a greater role in earning money to contribute to the household budget. If a female family member was present, she was expected to cook. As one girl in Nairobi explained, '*I have a big brother, but if I am around, he cannot cook. If I am not there, then he cooks*'. Similarly, in Meru, the main female caregiver was responsible for preparing food, often with the help of both younger and older adolescent girls who sometimes took the lead in preparing meals if they were not in school, or at the weekend. In Samburu, unmarried adolescent girls were involved in buying foodstuffs, whilst married adolescent girls and mothers prepared food, occasionally helped by younger adolescent boys. It was suggested that the recent drought has made mothers and female caregivers '*busier*', thus placing a greater responsibility on adolescent girls, particularly in relation to caring for their younger siblings, sourcing food and preparing meals. As part of the hustling lifestyle in Ngomongo, Nairobi, adolescents were often left to fend for themselves, and were responsible for finding their own food, particularly during the day.

Food status and aspirations

Adolescents in all three sites emphasised the importance of having energy and of being attracted to food that was filling and '*fuelling*'. For many, however, food consumption was not only about sustenance, but also imbued with social significance linked to status. In Ngomongo and Utalii in Nairobi, this was thrown into sharp relief. Adolescents recognised that whilst they lived in one of Africa's most developed cities, they were themselves entrenched in incredible poverty. Being linked to wealthy Nairobi through geographical proximity and through objects on the dumpsite, adolescents saw and literally tasted '*the other side*'. In discussing their food aspirations, adolescents listed foods they desired including cakes, pizza and other items perceived as '*rich people food*', even if they could only acquire them from the dumpsite, where discarded food is brought from airports, rich estates and hotels. A sense of shame and injustice was strongly intertwined with descriptions of eating other peoples' '*trash*', and adolescents were aware that they were making an emotional trade-off to source food at the dumpsite, but stressed it was their best option, '*we just have to eat it*'. Adolescent boys admitted feeling shame when they could not source food for different meals, and often ate food from the night before for their morning meal. Conversely, buying a snack or pastry to share

with others during break time at school motivated many to participate in income-generating activities. In discussing their food choices, participants in Samburu expressed boredom with their uniform diets and wished for more diversity in their diets. Married girls and *morans* (adolescent boys responsible for the security of the community and taking care of the cattle), confirmed their preference for *'the food that is available and I grew up liking'*. Adolescents in school, however, discussed their aspirations for spaghetti, chapatti and rice, all foreign foods that were novel and different to their normal diets. Similarly, in Meru, adolescents prioritised their desire for foods that were novel, fast, energy-giving, filling and *'fashionable'*, although *'traditional'* knowledge about healthy foods, passed down orally between generations, also held significance for adolescents.

Factors affecting nutrition

Nine interrelated themes were found to influence adolescents' access to adequate and healthy food: household economic status; income-generating activities; social norms and restrictive food practices; food knowledge; educational attainment; climate; security; sexual and reproductive health; and service delivery issues.

Household economic status

Low household economic status emerged as a significant factor underlying adolescents' nutritional status and food insecurity. In Nairobi, adolescents in both sites agreed, *'we just afford the unhealthy but cheap food'*. The cost of food was identified as a barrier to eating sufficient food, and the option of choosing nutritious food was a luxury most participants could not afford. *Ugali* is a staple component of the daily diet, but in response to the recent and rapid rise in the cost of maize flour across the country, caregivers in Ngomongo concluded, *'we just taste, we don't get satisfied, we just taste'*. The impact of the price of maize was felt in Utalii, but not to the same degree. There, several adolescents suggested that *'worrying'* about food was a concern for their parents, not for them. In Samburu, the drought had a negative impact on livestock, the main source of revenue, and the inability to sell unwell or dying animals had led to lower-than-normal incomes and a lack of money to purchase food. This further restricted the already limited diet. As one *morán* explained, *'due to the current situation there's no market for the few animals left for us to sell, so we don't have money to buy food. There are no other casual labor activities that one can do to get some money, so they have to take blood from the animals'*. Tapping blood was described as an 'art' that required expert knowledge to drain a quantity of blood that would not be detrimental to the cow's health. Blood mixed with milk is a traditional Samburu meal, particularly eaten to supplement the diet during dry seasons, but with the effect of the drought on milk production, adolescents reported that they were sometimes having to consume blood alone. In Meru, low household income was also a barrier to adolescents eating well, and again the rising price of key commodities such as maize flour was keenly felt. The lack of diversified income in Meru contributed to an over-reliance on farm produce, yet space for cash crops was prioritised at the expense of growing food to eat. In Maua, this was particularly striking and local programme implementers estimated that 95% of land was dedicated to the production of *miraa*. Some families reported eating only two rather than three meals a day when food was scarce, and adolescents confirmed that they often had to eat *'cheaper'* food. As one young mother stated, *'meat is a dream'*.

Income generating activities

Across the sites, both female and male adolescents were engaged in income-generating activities to provide resources for their own and/or their household's food. In Nairobi, particularly in the informal settlement of Ngomongo, piecemeal work and 'hustling' were common. The informal labour activities that adolescent girls were engaged in included washing clothes, collecting plastic and scrap metals to wash and sell, and, for older girls (aged 14 years onwards), prostitution. In both Ngomongo and Utalii, older boys described hustling for work at construction sites, and being paid to carry and transport stones. Experiences of exploitation were common, with boy's wages often based on a middlemen's visual appraisal of their age and strength. In Samburu, income generation also played a major role in determining school attendance. Caregivers were forced to spend long hours in search of work, leaving adolescents, particularly girls, to take care of household activities and younger siblings. There, adolescents also participated in labour activities, although in Ndotó, employment options were limited for the entire community. In Meru, the main income-generating activities for adolescents were related to cash crop industries, including tea, coffee, bananas and *miraa* production. Local programme implementers confirmed that children began to work in *miraa* production from the age of seven, but their involvement with *miraa* created significant health issues for adolescents. In Maua town, adolescent participants estimated that two to three girls and seven to eight boys in every ten habitually chew *miraa*. They reported that this directly affects food consumption as *miraa* suppresses appetite.

An additional income-generating activity mentioned in all sites was brewing alcohol. Local alcohols included *busaa* (made from maize flour), *changaa* (made from herbs, sugar and honey) and *muratina* (made from honey and herbs).

Selling alcohol was a way to generate income to buy food. Drinking alcohol was highlighted as a common strategy to overcome hunger, but the beverages were also seen as food sources in themselves, as people consumed the residue left over from the brewing process.

Social norms and restrictive food practices

A number of social norms and restrictive food practices emerged as factors affecting adolescents and their access to adequate nutrition. In Nairobi, the hustling lifestyle meant that it was convenient to have ready-made food close at hand. Poor household storage facilities prevented food from being prepared ahead of consumption, and this contributed to the preference for street food. Traditionally, in Samburu, the community did not eat fish, eggs, chicken, donkey or pig, although now many people eat chicken and eggs if they have the opportunity. A number of gender-specific eating practices were evident. Pregnant women (including adolescent girls) were restricted as to the quantity and type of food they could eat in order to limit the foetus size and reduce the risk of obstructed labour. For the duration of pregnancy, their diet mainly consisted of milk mixed with water, and their intake was monitored by their husband, mother-in-law and community elders. In Meru, pregnant women were encouraged to consume lots of fluids, such as soup, fruits and yams. Unmarried adolescent mothers suggested that they were sometimes seen as a burden on their households, and as such, those living at home often received only one portion of food to divide between herself and her child. Many reported that they would prioritise their child, and at times forego meals. Concerns were raised that this practice and restrictive diets during pregnancy and the post-partum period may affect the production of breastmilk, and contribute to young mothers not breastfeeding exclusively for six months.

Gender-specific eating practices were also evident for boys. In Samburu, a boy could no longer eat food prepared by his mother following his circumcision. He was prohibited from eating in front of women, and had to eat in the company of at least one other circumcised boy. Similarly, in Meru some circumcised boys ate separately, for, as a community leader in Mikinduri confirmed, *'the boy can no longer enter the mother's kitchen. He starts shying away from his mother, he cannot tell her directly that he is hungry, he can't show her his weakness'*. Across the fieldsites, it was agreed that male members of the household ate first and larger portions of food. Adolescent boys were generally given more than girls because they were perceived to be stronger, and had greater needs associated with protecting the family and doing more physical household chores such as fetching water. Despite their heavy workload, female caregivers and girls were allocated less food at meals and often ate last, although in Utalii, Nairobi, caregivers did suggest that it was more common for girls to snack in-between meals than boys.

Food knowledge

A commonality across fieldsites was that adolescents generally perceived *'healthy food'* and *'good food'* to a) provide energy; b) *'keep you full'*; and c) be natural. In Nairobi, for example, rice was considered to be unhealthy because it did not *'keep hunger away for long'*. Despite classifying roadside food as unhealthy, it made up a substantial component of the diets of adolescents in Nairobi. Some adolescents emphasised the need for a range of food types and thus appeared familiar with the concept of a varied diet, yet wanting different foods was also associated with taste preferences and status (as discussed above). Adolescent boys in Ngomongo described their age-mates as *'not having knowledge, they only eat to be strong. They don't really know which foods are good and which aren't good'*. Caregivers agreed that money (purchasing power) was more important than knowledge about what to buy. Amongst adolescents in Samburu, there was less recognition of the need for, or importance of, a varied diet. This could reflect the fact that a more limited diet was their norm, although when prompted they were able to list healthy foods, including proteins, fruits, vegetables and carbohydrates. Nonetheless, they suggested that during times of serious drought and elevated food insecurity, perceived nutritional content did not drive consumption. Instead, food was chosen simply to satiate hunger and give energy. Girls were more likely to describe learning about food and food preparation from their mothers and friends, whilst boys (in Meru) also mentioned television and billboard adverts as sources of information. Adolescents who attended school confirmed that they received information on healthy foods from *'books and teachers'*. Food and nutrition is part of the current school curriculum as a unit within the subject *'Science'* taught in classes 1 to 8, however stakeholders raised the concern that not all schools taught the curriculum reliably and placed limited value on the subject.

Educational attainment

Across the fieldsites, school attendance was seen as a protective factor against a range of adolescent vulnerabilities that had the potential to impact nutritional status. In Nairobi, staying in school was viewed by participants as protecting girls from pregnancy and boys from the pressure of criminality. The value of education was highlighted for similar reasons in both Meru and Samburu, where it was also seen to discourage early marriage and participation in child labour activities. In all three counties, the rate of dropout between primary and secondary school was very high (MOEST, 2015). Whilst children and adolescents may have been registered at school, attendance was variable and

dependent on a household's financial situation and adolescents' competing responsibilities including income-generation activities and seasonal duties, such as harvest.

Climate

Climate issues were most keenly felt in Samburu. Adolescents noted that as a direct result of drought, the health of livestock is threatened, animals produce less milk and, due to high rates of livestock death, less meat is available to them. In addition to the impact on the community's health and nutrition status, weak livestock exerts a significant emotional impact on the community. In Samburu, the value, emotional connection and psychological identification of communities with their livestock, particularly cattle, was clearly evident (see photograph taken by an adolescent girl during a workshop in Ndoto). Climate was also an issue in Meru. Recent bouts of dry weather had resulted in poor harvests and low-quality yields, and girls documented this as a significant feature of their lives.

Security

In Samburu, where *morans* act as key protectors of their villages, hunger was linked explicitly to cattle raiding. One local government representative explained, *'if you don't have what you eat, you must fight to get at least some milk, some meat when you are away from home with the animals'*. Insecurity from cattle raiding and highway banditry further affected access to food as it limited market and trade routes, and restricted the provision of external support to the area. Issues of security also had a significant effect on the lives of adolescents in Nairobi, particularly linked to theft and the threat of sexual violence. Elevated risk levels limited the movement of adolescent girls, restricting their access to certain food markets judged to be unsafe. Although the dumpsite in Ngomongo was an important source of food, it was perceived to be a dangerous place that required adolescents to take precautions against gang violence. One adolescent girl referred to the process of sourcing food from the dumpsite as being *'survival of the fittest'*.

Sexual and reproductive health

At the time of data collection, recent droughts had left many families low on livestock and food supplies, and with little money. In times of such insecurity, many decide to marry their daughters at an earlier age to secure their bride price, an important source of income and, given that bride price is usually paid in the form of cattle, a positive way to overcome a dwindling herd. The KDHS reported that 85% of married girls aged 15-19 years in Meru used modern contraception (with 0% unmet need), and 78% in Nairobi (with 6% unmet need), but that in Samburu, only 18% of married girls aged 15-19 years old used modern contraception (with 12% unmet need) (KNBS, 2015). Despite apparent access to contraception in Nairobi, adolescent participants in both Ngomongo and Utalii conveyed a negative attitude and reluctance to use condoms, frequently repeating, *'some people say you can't eat a sweet with its wrapper, you need to remove the wrapper'*. Early sexual debut, early marriage, unprotected sex and sexual violence were linked in all fieldsites to increased risk of pregnancy and HIV, and seen to have nutritional implications. National stakeholders highlighted that pregnant adolescents, adolescent mothers and adolescents with HIV are particularly vulnerable groups at significant risk of malnutrition. Reaching them remains challenging. Their needs are not well addressed or advocated for, and they are in danger of being left behind.

Service delivery issues

Health facilities are an important avenue for nutrition services, particularly during pregnancy and the first 1000 days, yet many adolescent mothers who participated in the study had not attended antenatal care (ANC). 'Youth friendly services' are outlined in policy (in the Reproductive Health Care Bill, 2014) but few appeared to be in place. The county hospital in Meru was the only study site that included youth friendly services, but none of the adolescent participants in Meru were aware of the youth-friendly centre at the hospital, and it was notable that ANC was not provided as part of its services. Adolescents did not regularly interact with health facilities and regarded them as *'places for sick people'*, rather than for preventative care. In all three sites, negative community attitudes towards early pregnancy made pregnant adolescents feel ashamed, and girls confirmed that they were likely to *'hide themselves away'* and not present for care. There was a lack of privacy at health centres and girls did not want to raise their profile by attending. Many adolescents recounted negative experiences at the point of care, including difficult interactions with health staff, and in Meru, adolescent girls emphasised that they did not attend ANC because they feared the mandatory HIV test that was part of the service, explaining, *'You prefer not to know your status'*. This suggests that, unfortunately, the inclusion of HIV testing within an integrated service actually created a barrier for the entire service.

School feeding programmes, another important route for nutrition services, were also rife with challenges. At the time of the study, the Government of Kenya had recently developed the National School Meals and Nutrition Strategy, encouraging all counties to provide safe, nutritious daily meals to all primary grade students. In both Nairobi fieldsites, local primary schools provided lunchtime meals, supported by a range of NGOs and WFP. School meals

were perceived to be a good motivator for keeping children in school, although caregivers in Ngomongo described the food as lacking in variety. Caregivers did not always know how much food was given to their children at school, and caregivers' perceptions of school-provided rations affected how much food they gave children in the household. If children were thought to have eaten a larger lunch at school, for example, they were likely to be given less for an evening meal at home.

In Samburu, schools were perceived to be a major source of food for children and availability of school meals impacted school attendance. There, participants explained that children were more likely to attend school when they saw smoke coming from the school kitchen. Standard portions were served to the pupils regardless of age, however, meaning that a four-year-old girl was allotted the same as an 18-year-old boy. Teachers explained that they sometimes tried to reapportion food, allotting more to the older pupils, although this was not always possible. In Meru, the school visited as part of the study reported receiving only minimal support from the government and did not have a partner organisation, so the provision of school meals relied on contributions from both caregivers and the school. Some children explained that they had to go home for lunch or skipped a midday meal altogether. Stakeholders emphasised that the provision of regular school meals would be a powerful incentive for children to attend school, and suggested that schools should cultivate a kitchen garden to supplement basic meal options with more vegetables. In Mikinduri, Meru, an NGO project had constructed fishponds in school grounds to provide a source of protein to contribute to the pupils' diets. As one girl reported, however, the pond at her school had dried up and could not be sustained through the dry season without using precious piped or well water.

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 use, 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 recognise their competing priorities.

'Use our groups, don't group us' - Adolescents expressed preference for being grouped together, unless interactions were likely to be particularly sensitive in which case grouping by gender was more appropriate. They also suggested grouping according to life stages: married girls and young mothers should be engaged separately from unmarried girls; and boys pre-and post-circumcision.

'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 crews, theatre groups and sports activities were also popular.

'Show us real experiences' - Adolescents confirmed that they found 'real life' stories to be the most engaging and affecting 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 and make associations with 'what is trending'. They also stressed the need to be spoken to with respect in order for them to feel comfortable to engage 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 (such as billboards, brochures and posters), 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. Adolescents stressed that different and multiple modes of engagement may be needed to interact with adolescents, but that all engagement should be transparent.

'Balance tradition and modern' - Although it was less apparent in Nairobi, adolescents in Meru and Samburu highlighted tensions between their desire for novel, 'foreign' foods, and traditional foods 'we grew up with'. Balancing the traditional and modern, not only in terms of food and nutrition but also regarding socio-cultural drivers and lifestyles, is important when engaging adolescents.

'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 *'assist us to foresee our future'* through building skills and interests. They were most receptive to learning when it built on activities they enjoyed and were good at. Participants emphasised the importance of engaging adolescents holistically, providing health and nutritional information alongside sexual and reproductive health services, education and vocational training.

Recommendations

Strengthen the visibility of adolescents

- Kenya 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 prevent them from seeking youth-orientated services. Interventions must be sensitive to variables including age, gender, socio-economic status, life experiences / stages, livelihoods and ethnicity. Effective engagement should target groups as defined and understood at the community level.
- The tendency at both policy and programmatic levels 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.
- 'Adolescents' must not be interpreted as a homogenous or standard group. Within this age group, different life-stages occur and should be accounted for. Similarly, adolescents are subject to a range of socio-economic and contextual factors that shape their lived realities. These sub-groups are not mutually exclusive, rather an adolescent can belong to or self-identify with multiple groups concurrently and over time. Assuming a user-centred design approach, interventions should therefore be developed in an age-, gender- and context-specific or -sensitive manner.
- Promising policy developments include the Food Security and Nutrition Policy (2011) and the Neonatal, Child and Adolescent Health Policy (2017), both of which highlight specific interventions for improving adolescent nutrition, and the National School Health Policy (2017), in which nutrition is one of eight key pillars. The challenge is to support these policies to be well implemented, and to advocate for the inclusion of adolescent nutrition in related policies that are being renewed, such as the National Youth Policy and the Nutrition Action Plan.

Influencing adolescent nutrition

- When taking adolescents as the central unit of analysis, it becomes clear that this group is uniquely affected in Kenya. 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 well-being.
- 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 can address 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 (for older adolescents); teachers (for those in-school); community leaders (for adolescent girls and boys of different ages); and religious leaders (less relevant in Ndoto and Samburu). Securing their buy-in and support is vital in both generating demand and facilitating the timely utilisation of programmes and services. Mentors and ambassadors who were the face of campaigns targeting adolescents were also identified as powerful advocates, but who is best placed to act in this regard and specifically in relation to adolescent nutrition, requires careful consideration and further research.
- Adolescents took a high level of responsibility for their own food choices, and often for food preparation for their household. Adolescents can therefore be agents of change for family members and their 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; HIV prevention, treatment and management; livelihoods; agriculture; education; social protection; and participation, governance and leadership. There was a particular bias towards girls and sexual reproductive health and HIV programming. Overall, however, programmes were not implemented at scale and coverage was limited.
- Various platforms engaged adolescents at the community level. Adolescents discussed their preference for being engaged at informal community spaces, through clubs and groups with peers and with a strong support/mentoring component. For those in formal education, school was identified as a positive and trusted platform for engagement, although it was noted to be a selective channel given that not all adolescents (particularly older adolescents and girls) attended. There is scope to actively engage adolescents through religious institutions, although only in communities where religious practices are valued and are routine. Valuable lessons should be learnt from the Ministry of Health and Nutrition International pilot programme for weekly iron and folic acid supplementation (WIFS) and adolescent nutrition education to inform further engagement with religious institutions, particularly in terms of how 'youth friendly' they are.
- 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 technology was a popular means of communication, although adolescents in Samburu had markedly lower access to and usage of all technology platforms. Older adolescents appeared to have slightly more access to technology than younger adolescents, and the internet was most frequently used, unsupervised, by older adolescents in Nairobi and Meru, mainly for social media (particularly Facebook and WhatsApp) and for Google searches. Television was generally more popular than radio, although access to television was lower. Positive engagement through mass media channels was highlighted, such as the *'Youth Café'* show on KTN News (television); KELIN talk shows on sexual reproductive health (radio), and *Shujaaz* (comic book and radio show). It is important to negotiate the use of new technologies with parents, caregivers and other 'gate-keepers', particularly if girls and younger adolescents are the target group for social media-based interventions.

Entry points for strategic partnership

- Actors already engaging adolescents in other sectors should be encouraged to collaborate with the Nutrition and Dietetics Unit and the Neonatal, Child and Adolescent Health Unit of the Ministry of Health. This will help mainstream nutrition-sensitive and nutrition-specific activities.
- Commitment to channels that can reach the most marginalised and vulnerable adolescents is needed. Adolescent programming must be creative and use approaches that target particular groups of adolescents (e.g. out-of-school adolescents and mature minors) in ways they prefer and are receptive to. Investment in these channels should be prioritised in mainstreaming nutrition-sensitive and nutrition-specific 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. The national move towards all health facilities adopting a 'youth friendly approach' is a realistic goal that should be supported as it is likely to have greater and more sustainable impact as opposed to creating sporadic and separate 'youth friendly services'. A youth friendly approach should engage adolescents in ways and through channels that adolescents 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 would help move away from the negative association between health facility attendance and sexual reproductive health issues.
- There is an urgent need to overcome bottlenecks in school feeding programmes and to improve the efficiency of school feeding, particularly in drought-affected zones. Portion sizes and micronutrient content should be adjusted to cater to the greater nutrient needs of adolescents as compared to younger children. School 'demonstration gardens' could supplement school meal provision with fresh products. Family contributions (e.g. in terms of foodstuffs, firewood or in-kind contributions) are also vital in some areas. Structural weaknesses inherent in the school system, including limited storage facilities for food products and poor access to water and sanitation need to be simultaneously addressed. Expanding school feeding programmes to 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.
- Including nutrition as a mandatory subject in the curriculum at both primary and secondary levels is an important component of educating adolescents about food and healthy eating. Teaching should include interactive and participatory learning experiences (e.g. through demonstration gardens). The ongoing inclusion of 'Food and Nutrition' as a key pillar in the School Health Policy, and the review of the life skills curriculum provides a valuable opportunity to further develop a holistic approach to school-based nutrition education.
- 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 to serve as an effective entry point to develop strategic partnerships with the private sector.

Summary of key policy and programme implications

Theme	Key considerations
Available food and food sources	<ul style="list-style-type: none"> • Make diverse, healthy, natural and affordable foods available and attractive to adolescents and their families, particularly in times of scarcity. Promoting healthier foods in small shops and food carts would increase their availability to adolescents who should be encouraged to choose healthier food over other options. • Curb the promotion and availability of unhealthy foods to adolescents and their families. • Improve food safety in urban settlements, particularly in relation to marketers, food vendors and small
Food responsibilities	<ul style="list-style-type: none"> • 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.
Food status and aspirations	<ul style="list-style-type: none"> • 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. • Snacks and 'on the go' food are particularly appealing to this age-group, and so cheap, safe and healthy ready-made food should be made widely available. • Although many adolescents were attracted to food they considered 'novel', there are avenues for promoting both traditional and modern 'fashionable' foods that align with adolescent aspirations.
Household economic status	<ul style="list-style-type: none"> • Adolescents and their caregivers must be better informed about the most cost-effective healthy foods available to them. • Poverty is widespread, particularly in the ASAL region, 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. • Healthy food is often more expensive, or at least is perceived to be, so it may be may useful to explore reducing costs associated with healthy 'natural' products whilst simultaneously decreasing access to non-nutritious, unhealthy foods.
Income generating activities	<ul style="list-style-type: none"> • Income-generating activities are often prioritised over school attendance, and adolescents and their families need strong incentivisation for this age group to continue formal education. • 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 after noons 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.
Social norms and restrictive food practices	<ul style="list-style-type: none"> • 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 (future value). • Engaging with key male and adult influencers is critical. • Raising awareness around good nutrition during pregnancy also needs to be discussed in these forums. In parallel, initiatives should improve antenatal care, delivery practices and postnatal care to assuage fears around having large babies (and therefore restricting diet during pregnancy). Delivery with skilled attendance should be actively promoted. • Cheap, safe and healthy snack foods should be made available for pregnant adolescents, and consideration given to snacks in terms of their value as food and micronutrient supplements. • <i>Morans</i> in Samburu are not able to access food-based services if women are present. This should be accounted for in programming to ensure they receive appropriate provision.
Food knowledge	<ul style="list-style-type: none"> • 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, particularly in areas where nutritious foods are not normally consumed and in urban settlements where there is a reliance on pre-prepared food.
Educational attainment	<ul style="list-style-type: none"> • 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 of both boys and girls, and the housework / household responsibilities of girls..
Climate	<ul style="list-style-type: none"> • 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.
Security	<ul style="list-style-type: none"> • Whilst it is important to invest in longer-term solutions to security issues, in the short- to medium-term girls in unsafe urban centres must be reached where they are and not left behind due to their constrained environment. • Links between social norms for herders, cattle-raiding activities, nutrition and community food security
Sexual & repr. health	<ul style="list-style-type: none"> • 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 well-being
Service delivery issues	<ul style="list-style-type: none"> • 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 reproductive health 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. • 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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Abbreviations

ASAL	Arid and Semi-Arid Lands
ANC	Ante-Natal Care
CBO	Community-Based Organisation
CHMT	County Health Management Team
CIDP	County Integrated Development Plan
CSO	Civil Society Organisation
DSW	Deutsche Stiftung Weltbevoelkerung
EAC	East African Community
FGD	Focus Group Discussion
ICLA	I Choose Life Africa
IPC	Integrated Phase Classification
IT	Information Technology
KCCK	Kangaroo Community Care Kenya
KNBS	Kenya National Bureau of Statistics
FAO	Food and Agriculture Organisation of the United Nations
GAIN	Global Alliance for Improved Nutrition
GAM	Global Acute Malnutrition
GOK	Government of Kenya
GIZ	German Agency for International Cooperation
INGO	International Non-Government Organisation
IRB	Internal Review Board
IRCK	Inter-Religious Council of Kenya
KDHS	Kenyan Demographic Health Survey
KEMRI	Kenya Medical Research Institute
KFSSG	Kenyan Food Security Steering Group
MAM	Moderate Acute Malnutrition
MMN	Multiple Micronutrient
MYSA	Mathare Youth Sports Association
MOE	Ministry of Education
MOH	Ministry of Health
MUAC	Mid Upper Arm Circumference
NCA	Nutrition Causal Analysis
NCD	Non-Communicable Disease
NGO	non-Government Organisation
NDU	Nutrition and Dietetics Unit

NCHAU	Neonatal Child and Adolescent Health Unit
PNC	Post Natal Care
RICEP	Rescued and Improved Community Education Programme
SAM	Severe Acute Malnutrition
SDG	Sustainable Development Goal
SMART	Standard Monitoring of Relief and Transition
SUN	Scaling Up Nutrition
UNICEF	United Nations Children Fund
UNFPA	United Nations Population Fund
WASH	Water Sanitation and Hygiene
WFP	World Food Programme
WHO	World Health Organization

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 and delivery of strategic nutritional messages and interventions for this specific target group. More research is needed on the nutritional status of adolescents globally (Leenstra et al., 2005; Patton et al., 2016).

In Kenya, a nutritional transition is occurring in both rural and urban settings (Keding, 2016) due to multiple driving factors including food insecurity and the rapidly changing food system. Food insecurity is a persistent problem in parts of the country, resulting from regular droughts and other factors linked to climate change, high costs for national food production, and the fact that nearly half of the population live in poverty (Mohajan 2013). The food system is changing and supermarkets are becoming increasingly prevalent and popular (Rischke et al., 2015). In urban Kenya, supermarkets service consumers at all income levels, with low income customers constituting a significant portion of sales (33%) (Neven et al., 2006).

Data on adolescent nutrition, particularly for 10-14 year olds is sparse, with the Kenyan Demographic Health Survey (KDHS) focusing on women of reproductive age (15-49 years) and children under five years (Kenya National Bureau of Statistics (KNBS), 2015). Broadly, undernutrition and micronutrient deficiency are among the most pervasive nutritional issues in Kenya with a 26% stunting rate in children under five (KNBS, 2015). While evidence indicates undernutrition as the most pressing nutritional concern amongst children (Masibo and Makoka, 2012), adults in Kenya may be more likely to be overweight and obese than underweight. In Kenya, 25% of rural dwelling women, and 40% of urban dwelling women of reproductive age are either overweight or obese (Kimani-Murage, et al. 2015). This dual burden points to the salience of adolescence as a period of transition in nutritional status.

Although adolescents (10-19 years) make up 22% of the population in Kenya, research exploring the nutritional status of Kenyan adolescents is limited, and largely focused on anaemia and iron deficiency (UNICEF, 2012). According to the KDHS, the anaemia rate among non-pregnant women of reproductive age is 22% (KNBS, 2015). Among 10-14 year olds, the rate of anaemia is reported to be 16% (Kenya National Micronutrient Survey (KNMS) 2011). The Malaria Indicator Survey found anaemia for 15-19 year old adolescents to be 14%, the rate of iron deficiency to be 16% and iron deficiency anemia to be 8% (National Malaria Control Programme, 2016). According to the KNMS (2011) and National Malaria Control Programme, 2016) adolescents are predisposed to other micronutrient deficiencies including iron, zinc, vitamin B₁₂ and folate deficiencies.

A particularly hard to reach group, and a group at significant risk for malnutrition, are pregnant adolescents and adolescent mothers. It is estimated that 18% of girls 15-19 years have begun childbearing in Kenya (KNBS, 2015). A study conducted in 2009 among pregnant adolescents in Western Kenya found the prevalence of hookworm infection to be 28%, and the prevalence of anaemia to be 61% (Mambo et al., 2015). An earlier study found that pregnant adolescents are at increased risk of severe anemia, preterm deliveries, still births, and neonatal deaths (Leenstra et al., 2004). As a significant cause of stunting among

children under-five years, poor maternal nutrition perpetuates a generational cycle of malnutrition due to lack of education and reduced economic opportunities and other determinants.

Another hard to reach group that is at risk of malnutrition are adolescents with HIV. In Kenya, HIV prevalence is currently highest among adolescents and youth (10-24 years) with 16% of all people living with HIV being within this cohort and 21% of all new HIV infections are in young women aged 15-25 years (KNBS, 2015). The Kenya National Guidelines for HIV and Nutrition (2006) outline that HIV increases nutritional requirements, yet at the same time reduces nutrient intake and uptake. An inability to consume sufficient and/or quality food has been significantly associated with non-adherence to ARTs (Berhe et al., 2013).

Nutrition interventions for this age-group have traditionally used school-based and health facility based delivery platforms (e.g. Woodruff et al., 2006; Leenstra et al., 2009; Omwami et al., 2011) however these may not reach the most vulnerable. A number of school-based feeding programmes among primary school children have been met with only marginal success (Bhutta et al., 2008), and it is unlikely that marginalised sub-groups, including pregnant adolescents and those from low-income households, benefit from school-based services (KHRC, 2010). There is limited literature on the uptake of nutrition services at health facilities by this age-group, although in a review of sexual and reproductive health (SRH) services, the Division of Reproductive Health, Ministry of Health (MOH) (2013) concluded that 'youth friendly services' are not effectively understood or applied at scale in Kenya.

Promising policy developments in Kenya include the Neonatal, Child and Adolescent Health Policy (2017) and the Food Security and Nutrition Policy (2011) which both highlight specific interventions for improving adolescent nutrition, and the National School Health Policy (2017), in which nutrition is one of the eight key pillars. Adolescent-specific policies (directly targeting adolescents and/or which have outcomes directly affecting adolescents), and adolescent-sensitive policies (indirectly targeting adolescents by reaching other cohorts which include adolescents) are numerous and cross-sectoral, and focus on needs in the areas of health (mental, sexual and reproductive, nutrition, HIV prevention, substance and drug abuse, gender based violence), education, social protection and human rights, amongst others. It is important to note that whilst policies have been passed by the relevant government institutions, it is difficult to ascertain the extent to which they have been operationalised or their impact.¹

Adolescents are not new targets for programming in Kenya, especially in the SRH/HIV fields that have established in-roads and acquired expertise for a number of decades. To date, however, the lack of evidence concerning nutritional priorities of this age-group, and the remaining questions on how to effectively reach them has limited the number of successful nutrition interventions that target this vulnerable group.²

Against this backdrop, there remains a need to better understand adolescent nutrition in Kenya, and to develop innovative communication and intervention approaches that address the nutritional needs and preferences of adolescent groups (Patton et al. 2016).

¹ A good example is the regulation on mandatory food fortification. While this is law, and a proportion of large scale manufacturers have fortified various brands of maize/wheat flour and oils, extensive efforts in public sensitisation campaigns, capacity building, monitoring and enforcement of this law are still needed to ensure medium-scale and small-scale manufacturers adhere to the 2012 regulation.

² A deeper assessment can be found in the accompanying report that presents a situational analysis of adolescent nutrition policy and programming in Kenya.

Research objectives

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

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

Research outputs

The research has several interrelated outputs:

- Substantive country-specific report based on newly gathered empirical data.
- Concise report summarising key findings.
- Detailed country-specific spreadsheet of stakeholders engaged in adolescent programming and inventory of delivery channels and engagement mechanisms.
- Four-country literature review.
- Cross-country synthesis highlighting key learning across Cambodia, Guatemala, Kenya and Uganda.

Report structure

This report details the research conducted in Kenya. Prior to its finalisation, WFP were invited to provide feedback that was then incorporated as appropriate. The report is structured to be of operational use to WFP and partners, and presents valuable new data that contribute to the evidence base on engaging adolescents for nutrition, health and sustainable development.

Following the introduction, the study's methods are outlined in detail including contextual details of the study sites. The research findings are presented in four chapters. Chapter 1 focuses on defining adolescence including definitions at the national level and also community-level markers. Chapter 2 addresses food and nutrition, describing available food and food sources; food responsibilities and self-reliance; food preferences, motivations and aspirations. Chapter 3 explores interrelated factors affecting adolescent nutrition: household economic status; income generating activities; social norms and restrictive food practices; food knowledge; poor educational attainment; climate; security; sexual and reproductive health issues; and service delivery issues. Chapter 4 discusses the engagement of adolescents. It identifies their key influencers and reports on the communication and media landscape. It summarises existing adolescent programming and highlights adolescents' preferences about how they should be engaged. The conclusion presents a series of recommendations to strengthen the visibility of adolescents; influence adolescent nutrition; engage adolescents; build on platforms for engagement; and develop entry points for strategic partnerships.

Methodology

The research was conducted in line with prevailing ethical principles to protect the rights and welfare of all participants. Permission to undertake the research was granted by Kenya Medical Research Institute (KEMRI) (see Annex 1). The research was supported by the WFP Country Office in Nairobi and conducted in partnership with the Ministry of Health Nutrition and Dietetics Unit (NDU). The research was conducted in three interrelated phases: document review; stakeholder mapping; and formative research.

Phase 1: Document review

Undertaken at the start of the consultation process, the rapid desk review provided a solid foundation for the work. It sourced material published in peer-reviewed journals and grey literature including programmatic documents, country reports and national demographic surveys. The complete literature review was submitted as a standalone report, *'Adolescent girls nutrition in Cambodia, Uganda, Kenya and Guatemala: a review of the literature'*. The full texts of all referenced material were collated and submitted as part of the research portfolio.

Phase 2: Stakeholder mapping and programme landscape exercise

Stakeholder engagement was initiated in April 2017. Building on preliminary meetings with key I/NGO stakeholders, the core research team facilitated a workshop to provide an overview of the stakeholder mapping, secure partner engagement, consult on possible formative research site selection, and identify additional stakeholders using a snowball technique. Through the consultation process over 100 key partners focusing on adolescent support (i.e. nutrition, health, sexual and reproductive health, education, research, etc.) were initially identified. Priority was given to 47 key stakeholders based on the relevance of their programming to the research and they were included in the mapping exercise between May and August 2017 (see Annex 2).

Information on each stakeholder organisation was collated and tabulated in an Excel spreadsheet (submitted as part of the research portfolio). In addition to contact information, the mapping categorised the focus, timeframe and location of interventions, the target group (age, ethnicity, gender), the modes of engagement; key research studies produced (if any); and areas of interest (e.g. requests for additional information on relevant topics where data is lacking). From this, both gaps and future opportunities for cross-sector programming were highlighted, specifically opportunities for effective nutrition and nutrition-sensitive interventions.

The WFP national research consultant undertook a situational analysis of adolescent nutrition and reviewed relevant demographics, pregnancy statistics, education statistics, employment levels, current dietary practices and trends, and nutritional issues. It also identified entry points for advocacy and programming. The report, *'Kenya Assessment Situational Analysis on Adolescent Nutrition Policy and Programming'* was submitted as part of the research portfolio, and key findings integrated into both the literature review and the substantive country report as appropriate.

Phase 3: Formative research

After an interim period during which ethics clearance to conduct primary data collection was secured, the formative research phase of the study was conducted in June-August 2017, including 24 days intensive in-country fieldwork (see Annex 3).

Fieldwork facilitation support

Implementing partners were engaged in each county to help facilitate the community-level engagement critical for the fieldwork component of the study: DSW in Nairobi; World Vision in collaboration with the Sub-County Public Health Officer in Samburu; and I Choose Live Africa (ICLA) in collaboration with the County Nutrition Coordinator in Meru. Partners were required to liaise with County Health Management Teams (CHMTs) to introduce the research project. They were responsible for organising meetings between the research team and relevant interlocutors at county, sub-county and community levels, and were requested to provide at least one staff member (for a maximum of six days) to accompany the research team in the field and make introductions at the local level.

Study site selection

The research sites were selected by the Ministry of Health NDU and NCAHU departments and WFP Country Office in collaboration with Anthrologica. A number of key criteria were considered:

- Do the sites inform existing WFP/MOH nutrition programming or strategic planning to better reach and serve adolescents?
- Are diverse populations included (rural, urban, pastoralist, agricultural)?
- Does the site have a field office that is able and willing to support the research?
- Does the site have an established local partner providing outreach or interventions for adolescents? Are they willing/able to help facilitate the research?
- What are their mechanisms / delivery channels for engaging adolescents (e.g. youth clubs, community outreach) and can these be used to help identify and recruit participants?
- Do they include adolescents of different age ranges in their programming (e.g. 10-14 year olds, 15-19 year olds)?

Given the diversity of Kenya, three counties and specific communities in each were selected for the research: Nairobi, one informal community (slum) and one urban community; Samburu County, one rural pastoralist community; and Meru County, two rural agriculturalist communities. Due to time and available resources, Anthrologica advised this as the maximum number of fieldsites for the research

Table 1 below details the key background demographic, education, health and WASH characteristics of field sites Nairobi, Samburu and Meru. Detailed information on the ecological and economic features of the three counties can be found in Annex 4.

Key nutrition indicators for the adolescent age group vary widely across Kenya. At the county level, available data reports women of reproductive age (WRA) (aged 15-49 years), and children under-five years. Disaggregated data are not collected on adolescents, specifically the 10-19 years age group. Graphs 1 and 2 detail key nutrition indicators from the KDHS to indicate the relative nutritional status of the three counties included in the research (KNBS, 2015). The nutritional status of children in particular can be used as a proxy indicator for understanding the nutritional and health status of a community.

Nairobi

Nairobi county indicators show higher levels of overweight and obese women than the national average and an overall opposite trajectory to Samburu county. Nairobi is a county of inequality and inequity with affluent populations living next-door to those in extreme poverty, therefore these figures may over-represent middle and upper middle-income areas. County-level stakeholders raised major concerns with the levels of obesity in adults, malnutrition in children and universal '*hidden hunger*' whereby people appear healthy or overweight but have micronutrient deficiencies due to poor quality diets that lack diversity (see also Von Grebmer et al., 2014). Preliminary findings from a causal analysis conducted in

Table 1 – Background demographic, education, health and WASH characteristics of field sites Nairobi, Samburu, Meru

County	Population	Major Ethnicities	Area (km ²)	Land typology	Sub-County/ Constituency	Ward/Sub- location	Research partner
Nairobi	4,253,330 ³	Kikuyu, Luo, Luhya, Kalenjin, Kisii, Kamba, Asian, European, Somali	696 ⁴	Forest areas; steep valleys; urban ⁵	Ruaraka	Korogocho (Ngomongo) Utalii	DSW
Samburu	319,708 ⁶	Samburu, Turkana, Rendille, Borana	21,022 ⁷	Arid and semi-arid; mountainous areas ⁸	Samburu North	Ndoto (Lesirikan)	World Vision
Meru	1,601,629 ⁹	Ameru, Kikuyu, Embu, Kamba	6,936 ¹⁰	Upper highlands to lower midlands ¹¹	Tigania East Igembe South	Mikinduri Maua	ICLA

Summary of key Education and Health characteristics of field sites Nairobi, Samburu, Meru¹²

County	Primary school attendance		Secondary school attendance		Child-bearing - 15- 19 years	HIV prevalence children, adolescents and youth ¹³	Circumcision amongst 15-49 year old women	Age at first marriage for women 25-49 years
	Male	Female	Male	Female				
Nairobi	92	93	52	45	17	7	8	22
Samburu	84	92	27	29	26	4	27	18
Meru	91	86	27	35	20	2	27	20

³ Nairobi County Development Plan 2014 based on the Kenya Housing and Population Census (2009)

⁴ Nairobi County Development Plan 2014

⁵ Meru County Development Plan 2013-2017

⁶ Meru County Development Plan 2013-2017

⁷ Samburu County Development Plan 2013-2017 based on the Kenya Housing and Population Census (2009)

⁸ Samburu County Development Plan 2013-2017

⁹ Meru County Development Plan 2013-2017

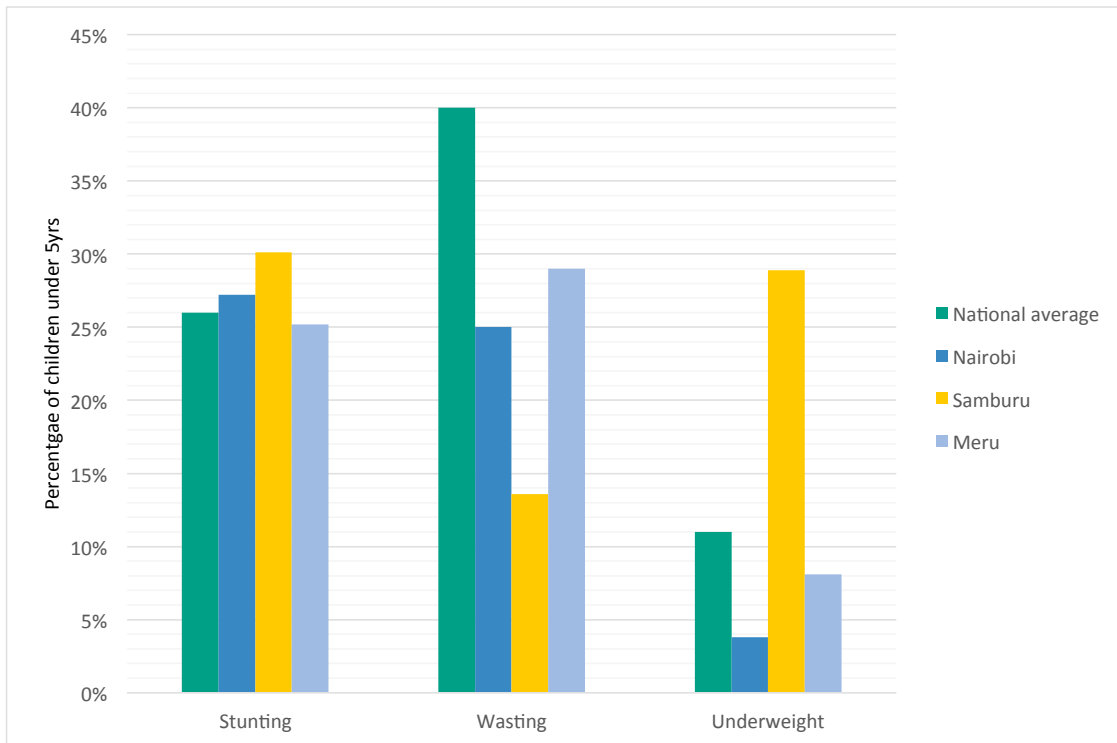
¹⁰ Samburu County Development Plan 2013-2017

¹¹ Meru County Development Plans 2013-2017

¹² KDHS 2014 (KNBS, 2015)

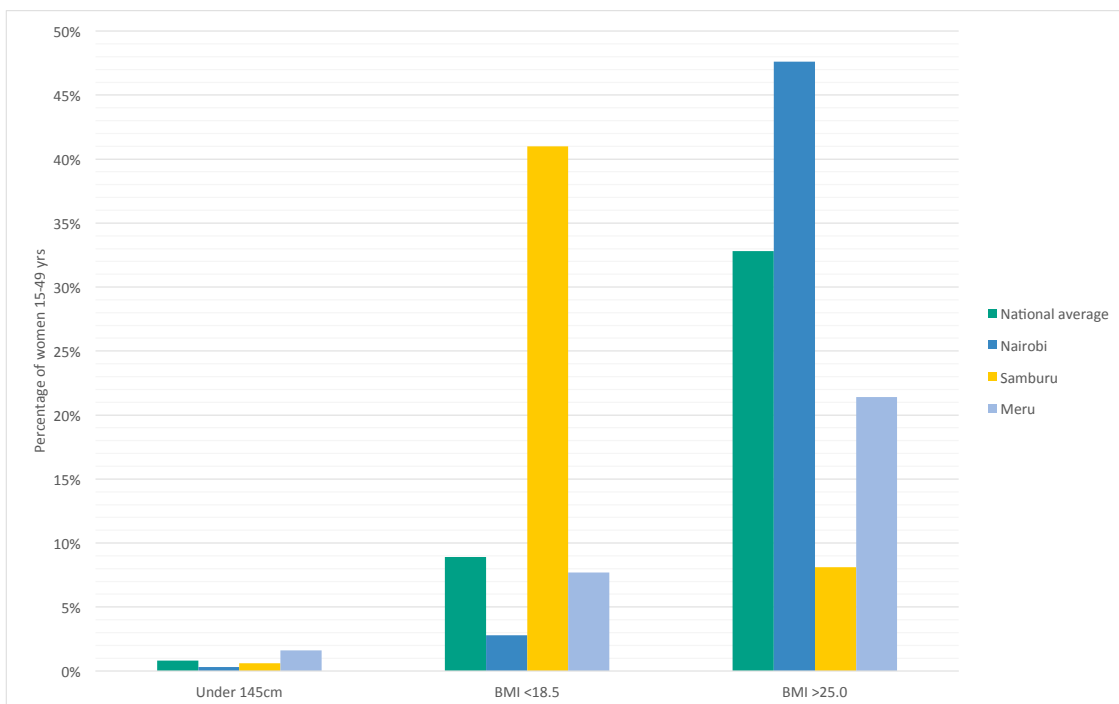
¹³ Kenya HIV Estimates 2014

Graph 1 – Under-five nutritional status (% < 2 SD)



<2SD from median of the WHO Multi-Centre Growth Reference Study sample (2006)
Data extracted from KDHS (KNBS, 2015)

Graph 2 – Women’s nutritional status (15-49 yrs) (%)



Data extracted from KDHS (KNBS, 2015)

2016 in the informal settlements of Mukuru and Viwandani indicated that 14% of families regularly ate less or equal to three food groups and only 8% of children aged 0-6 months were exclusively breastfed (Action Against Hunger, 2017). In the 2016 SMART survey of Nairobi, informal settlements, Ruaraka, and Korogocho informal settlement specifically, reported the highest percentages of underweight children with severe wasting, and the second worst indicators for stunting and mid-upper arm circumference measurements (MUAC) for Severe Acute Malnutrition (SAM) (Concern, 2016).

Although food security has not been studied in Korogocho or Utalii specifically, Kimani-Murage (2014) concluded in their study of food insecurity in Nairobi urban slum settings a number of issues facing affecting the availability, access and utilisation of nutritious food and that, *'The use of negative coping strategies to address food insecurity such as reducing the number of meals, reducing food variety and quality, scavenging, and eating street foods was prevalent'*.

Ngomongo is one of seven villages that make up Korogocho informal settlement. Korogocho (a Kiswahili term meaning *'shoulder to shoulder'*) is estimated to be the fourth largest informal settlement in Nairobi. Characterised by poor infrastructure and overcrowding, Korogocho also borders one of Nairobi's major rubbish dumps, Dandora, and another smaller site, known locally as *'The Quarry'*. The majority of income generation is informal, including daily labour at construction sites. The major ethnic groups of Ngomongo, Kikuyu and Luo live in separate areas of the settlement due to long-held intertribal tensions. There is a substantial number of private clinics and pharmacies in Ngomongo but the closest health centres are within the wider Korogocho and Babadogo wards in Ruaraka. For an estimated population of 41,946 there are 11 'informal' (e.g. non-government registered) primary schools and two informal secondary schools, but no registered government schools in Ngomongo.¹⁴ In describing life in Ngomongo, one community leader commented,

'Living standards in the slum is low, life seems cheap and a bit tricky. Most people don't take too much interest in life, they live for today and that makes it more difficult. They don't think about tomorrow, if you wrong me now, we finish with you and there's no second thought'.

Utalii Ward includes both Mathare 4 A and Utalii sub-locations. Local residents explained that once people make enough money, they graduate outside informal settlements to areas such as Utalii sub-location which have *'flat'* or *'long'* houses rather than tin roof structures. As such, residents are more likely to have a fixed income than those in the informal settlement and often work within the nearby estates, as shop-workers or office assistants. For a population of approximately 36,275, Utalii has two public primary schools and 27 informal primary schools, one public secondary school and two informal secondary schools.¹⁵ Mathare Health Centre is a Level 2 facility situated within Utalii ward, although community members also use Lion's Health Centre and Babadoga Health Centre in the neighbouring ward.¹⁶ There are six private health clinics within Utalii. There was disagreement over the exact terminology used to define Utalii, but adolescent participants who resided in the area suggested they used the term *'ghetto'* which they thought to be appropriate.

Samburu

Samburu county reports a markedly higher percentages of stunting, wasting and underweight in under-fives, and women with a BMI below 18.5. A 2016 standardised monitoring of relief and transitions (SMART) survey in Samburu concluded that 10.5% of women had a mid-upper arm circumference (MUAC) that classified them as malnourished (Samburu County Health Department, 2016). Chronic malnutrition, as indicated by stunting, impacts the cognitive ability and economic potential of an individual and economic at 30.1%, defined as critical by the WHO threshold for malnutrition.

¹⁴ <https://softkenya.com/kenya/korogocho-county-assembly-ward/>

¹⁵ <https://softkenya.com/kenya/utalii-county-assembly-ward/>

¹⁶ The Kenyan classification system for health facilities denotes community health facilities as Level 1; medical clinics as Level 2; health centres as Level 3; full hospitals as Level 4; county referral hospitals as Level 5; and national referral facilities as Level 6.

On the 10 February 2017, the Kenyan Government announced a national drought emergency, and listed Samburu as one of the 23 most affected counties. Crisis-levels of food insecurity were projected to affect 3.5 million Kenyans by August 2017 and as an ASAL county Samburu is proportionately more affected.¹⁷ The 2017 Long Rains Seasons Assessment completed by the Government of Kenya in July 2017 estimated Samburu to be at Crisis phase of food security (Integrated Phase Classification (IPC) 3) driven by the poor performance of the long-rains, resource-based conflicts including cattle rustling, pests including army-worm, flash floods, high food prices and low access to water.¹⁸ Findings included maize stocks below long-term average, fair to poor livestock condition and negative coping strategies including reduced portion size and number of meals, and negative livelihood coping strategies such as selling livestock. Forty percent of the population scored 'poor' on Food Consumption scores, and the trend towards high and worsening malnutrition rates was linked to food insecurity and poor dietary intake. The study estimated that 48% of the population of Samburu, approximately 137,000 people require food assistance and that the food security situation was likely to worsen as rangeland resources and crop production further deplete throughout the year (KFSSG, 2017).

Samburu North sub-county consists of 75% Samburu and 20% Turkana, with representation from other ethnic groups including Somali, Meru and Kikuyu. The headquarters of Samburu North is Baragoi, nationally renowned for inter-tribal conflict between the Samburu and Turkana who 'share' the town, with territory separated by the main road that runs through the town centre. Violence, gunfire and fatalities are commonplace in Baragoi and its surroundings.¹⁹ Insecurity makes Samburu North particularly marginalised from the rest of the country. Highway banditry has increasingly become a viable source of income, but disrupts the flow of goods and services and has led to a reduction in support from development agencies.

The research site in Samburu North was Ndoto Ward. There is a significant presence of Turkana people living in Samburu North, but the research focused on the Samburu tribe who make up the majority of Ndoto Ward. Like Kenya's other pastoralist tribes, the Samburu people rear large herds of cows, sheep, goats and camels, which they openly graze on their communal land. Traditional Samburu huts are constructed from sticks and twine, moulded together with cow dung. Heavy fencing around the *manyattas* (village-like groupings of huts) protects the community from wild animals and outside invaders. Following circumcision, young males selected by the local leadership and elder structures become *morans*, meaning 'community warrior', and have the responsibility to herd the animals and protect the community. Compounds include up to 20 different families living together and polygamous marriage is a common feature of Samburu culture. Samburu traditional dress is distinctive, particularly the rows of beads worn by girls (usually those not in school) and coiled gold rings worn on the ears of married females. Beads hold immense symbolic value in their representation of key life stages: birth, circumcision, marriage and death.

For a population of 14,912, Ndoto ward has seven primary schools and one secondary school, two health centres, and five dispensaries. In Lesirikan dispensary, services are limited to curative care, ANC and other child welfare services since a previous partner supporting comprehensive health services closed their programme. Ndoto Ward is a cholera hotspot with low latrine coverage.

Meru

As an agricultural area, the majority of land in Meru is used for crop farming and livestock keeping. Large-scale farming by private companies and livestock farming are also practiced. The county has a wide range of agro-ecological zones, the major food crops include mangoes, citrus, coffee, maize, beans, bananas,

¹⁷ <http://reliefweb.int/sites/reliefweb.int/files/resources/Kenya%20Sitrep%20No.%203.pdf>

¹⁸ The Integrated Food Security Phase Classification (IPC) is a set of standardized tools for classifying the severity and magnitude of food insecurity, using international standards and allowing comparability of situations across countries and over time. 'It is based on consensus-building processes to provide decision makers with a rigorous analysis of food insecurity along with objectives for response in both emergency and development contexts'. <http://www.ipcinfo.org>

¹⁹ The research team faced delays due to two occasions of violence preventing movement, with one local health official stating 'We welcome you with bullets'.

pigeon peas and cow peas and the major cash crops include tea, coffee, miraa (khat²⁰) and bananas. The main economic activity is agriculture, with the agricultural sector contributing 80% of the average household income (Meru County Government, 2013).

Meru county has a reputation for being green, fertile and productive, and performs in-line with or better than Nairobi, Samburu and the national average on almost all nutrition indicators. However, Meru North (inclusive of both Mikinduri and Maua wards included in the research sites) is recognised as a particularly vulnerable area with a 2012 SMART survey revealing a number of malnutrition hotspots. Tigania East division (inclusive of Mikinduri ward) reported that 11.7% of children from 6-59 months acutely malnourished; followed by 8.5% in Igembe North; 6.8% in Igembe South (inclusive of Maua ward); and 4.3% in Tigania West (MOH, IMC and OCHA, 2012). The findings showed low dietary diversity with less than four food groups being consumed in 64.2% of the sample, and only 53.3% of children aged 0-6 months were exclusively breastfed.

Meru North has also been affected by the 2017 national drought emergency described above, with most parts receiving 25-50% the amount of normal rain during the long rainy season, and heavily depleted crop production (notably maize) (KFSSG, 2017). The 2017 Long Rains Seasons Assessment placed Meru North's food security status as Stressed (IPC Phase 2) with household food stocks below long-term average and livestock body condition rated as fair to poor. The proportion of households with borderline and poor food consumption scores were 18.3% and 7.9% (slightly better than Samburu), with identified negative coping strategies including reducing number of meals, portion sizes and engaging in income-generating activities such as burning charcoal and petty trade. A reported 25% of children were vulnerable to malnutrition, linked to food insecurity, poor dietary intake, sanitation practices and poor maternal care-practices, partly due to mothers needing to walk farther to find water. The study concluded that 11% of the population of Meru North (approximately 88,300 people) require food assistance, and that the food security situation was likely to worsen as rangeland resources and crop production further deplete throughout the year (KFSSG, 2017).

The research sites of Meru with Mikinduri and Maua wards. Mikinduri is one of the five wards in Tigania East constituency. The population of Mikinduri Ward is estimated to be 33,796 but is reported to be rising.²¹ The majority of the population are farmers who rely on their plots for food and income generation. For its population of 33,796, Mikinduri has 19 government primary schools, nine private primary schools, 10 secondary schools and four health facilities. Maua ward is one of the six wards in Igembe South constituency. The population of Maua is estimated to be 33,648 including seven different tribal groups.²² Maua is one of the main urban centres in Meru County. The major cash crop in Maua is miraa (khat), with 95% of available land allotted to its cultivation with a high occurrence of child labour. For its population of 33,648, there are three health facilities, 17 public primary schools, 12 private primary schools, 24 non-registered primary schools and seven public secondary schools, with attendance rates at 65%.

Data collection

Data was gathered through a combination of the following methods:

- Desk review of data and literature
- In-depth interviews with key informants and stakeholders
- Focus group discussions with key informants and stakeholders
- Participatory workshops with adolescents
- Technology interviews with adolescents
- Feedback sessions with WFP and key stakeholders engaged during the mapping

²⁰ Khat is a flowering plant that has amphetamine-like stimulant properties. It is a controlled substance in many countries, although its production, sale and consumption is legal in Kenya. <http://www.emcdda.europa.eu/publications/drug-profiles/khat>

²¹ <https://softkenya.com/kenya/mikinduri-county-assembly-ward/>

²² <https://softkenya.com/kenya/maua-county-assembly-ward/>

Tool development: Based upon the rapid review of literature and programme documentation, a topic guide was developed around key themes: defining adolescence; I/NGO, governmental policy and programming; health (general) and sexual and reproductive health issues; food and nutrition; education; child rearing and adolescent influencers; messaging; research needs and document requests; IT/telecommunication context; and corporate responsibility. This formed the basis for the design of a series of research tools: semi-structured in-depth interview and focus group discussion frameworks per stakeholder group; participatory workshop frameworks and guidelines; and a survey on youth communication and technology channels (see Annex 5). The key themes were addressed in each interview, focus group discussion and workshop thereby allowing the analysis of themes across participant groups and field sites. Specific questions and probes were reviewed and refined during the study. The research was designed to facilitate input from multiple stakeholders using a phased approach, so that issues raised by one group of interlocutors could be discussed with other groups of stakeholders as appropriate. This ensured the collation of in-depth material and the rigour of its validation and triangulation. WFP and MOH had oversight of the tools prior to their finalisation and implementation.

Key informant interviews: Key informant interviews were held with a range of stakeholders at national, county, district and community levels. Interview questions were reviewed and refined during fieldwork in response to themes arising during the course of interviews conducted. The direction and content of each interview was determined by the interviewee and focused on issues they self-prioritised, although all components of the topic guide were covered to ensure thematic comparison. All interviews were conducted with as much privacy as possible, after full consent had been given and in the presence of the research team only. Each interview lasted for approximately 60 minutes.

Focus group discussions: Focus group discussions (FGDs) were held with selected stakeholders at the community level. As with the key informant interviews, the group discussions were structured by the prepared framework, but allowed for flexibility and the co-production of knowledge. In many cases, although not always, caregivers who participated in the FGDs were the mothers, fathers or grandparents of girls and boys attending the adolescent workshops. FGDs with community leaders and caregivers were held in communal meetings spaces, again after full consent had been given and in the presence of the research team only. Each discussion lasted for approximately 90 minutes.

Adolescent workshops: Participatory workshops were held with adolescent girls and boys aged between 10-14 years, and 15-19 years. Specific participatory methods were employed to ensure the meaningful engagement and integration of this group into the research and each session used appropriate terminology, language and creative methods in line with ethical good practices and within the scope of the Convention on the Rights of the Child. Methods used included daily activity timelines (to depict daily activities, food consumption patterns and household responsibilities); drawings (to depict perceptions of adolescence); social network mapping (to depict the people that have influence of the adolescent, and the places in which they get information); graffiti walls (to depict local food sources, dietary behaviours and different issues experienced by adolescents when accessing adequate and healthy foods); or a modified version of Photovoice using Polaroid cameras. Photovoice is a participatory photography and data analysis methodology used in community-based research to document and reflect local realities (Wang and Burris 1994). Cognisant of the different competencies of children and adolescents (James et al. 1998; Johnson, 2011) Photovoice was only used in the creative workshops with older adolescent girls (aged 15-19 years) who undertook a 'photowalk' to document and reflect their communities, daily practices, local food sources and dietary behaviours. Adolescent workshops were held in communal meeting spaces in the presence of the research team only. Each workshop lasted for between two and four hours.

Technology survey: After pilot testing the technology survey in Nairobi, the research team adapted the questionnaire so that it was appropriate to the field context. Questions were asked systematically in a step-wise manner on topics related to radio, television, mobile phone, internet use, social media engagement and behaviour. If one set of questions did not apply to the participant (e.g. they did not listen to the radio), the enumerator moved to the next set of questions until the questions were complete. The survey also included a final set of questions on other (non-technology) forms of communication. The

survey took between 15-60 minutes to complete, depending on how many question blocks it was appropriate for a participant to answer.

As a token of appreciation, all interviewees, FGD and workshop participants were provided with a beverage, snack and a bar of soap/toilet paper/note book. The 15-19 year old adolescent girls' workshops were of longer duration and so they were provided with additional refreshments and a Polaroid photograph of themselves or a group photo with their friends, depending on their preference.

Participants and recruitment

Study participants were selected using purposive, nonprobability sampling. A total of 312 participants were included in the study. At the national level, representatives from government, I/NGOs, the private sector and industry were selected for interview if they were involved in adolescent and/or nutritional programming, employment or marketing activities. At the county-level, interlocutors included a purposive sample of governmental, I/NGO and Civil Society Organisations (CSOs) involved in adolescent and/or nutritional programming. At the community-level, interlocutors included community leaders (e.g. local chiefs, youth leaders, women's leader), influential persons (including teachers and community health workers), caregivers of adolescents, and for the participatory workshops, adolescent girls and boys aged 10-19 years old.

Table 2 – Data collection activities

		National Nairobi		Nairobi Korogocho Ngomongo Utalii		Samburu Ndoto		Meru Mikinduri Maua		Total	
		Number of activities	Number of participants	Number of activities	Number of participants	Number of activities	Number of participants	Number of activities	Number of participants	Number of activities	Number of participants
Interviews	National-level policy makers	6	7	-	-	-	-	-	-	6	7
	National-level private sector officials (health, nutrition, media)	3	7	-	-	-	-	-	-	3	7
	National-level agencies + programme implementers	9	13	-	-	-	-	-	-	9	13
	County-level government officials	-	-	1	1	4	5	2	2	7	8
	County-level programme implementers	-	-	2	3	2	2	2	5	6	10
	County-level media and communications	-	-	0	0	1	1	1	1	2	2
	Community key informants	-	-	4	4	6	7	5	5	15	16
FGDs	Caregivers of adolescents	-	-	2	16	1	7	1	7	4	30
Workshops	Adolescent girls (10-14 yrs)	-	-	2	16	1	6	1	7	4	29
	Adolescent girls (15-19 yrs)	-	-	4	26	2	12	2	16	8	54
	Adolescent boys (10-14 yrs)	-	-	2	14	1	6	1	6	4	26
	Adolescent boys (15-19 yr)	-	-	2	14	2	14	2	12	6	40
Survey	Adolescent girls and boys (10-19 yrs)	-	-	30	30	20	20	20	20	70	70
	Total	18	27	49	124	40	80	37	81	144	312

The number and distribution of participants by district, activity and stakeholder group are presented in Table 2 above. A total of 144 data collection activities were undertaken (22 participatory workshops with adolescents, four FGDs with caregivers of adolescents, 70 technology surveys with adolescents and 48 interviews). In total, 149 adolescent boy and girls aged 10-19 years took part in the workshops and 70 adolescent respondents completed the technology surveys. Thirty caregivers took part in FGDs and 63 adults participated in in-depth interviews.

Consent

Prior to commencing each data collection activity, informed consent was obtained. The research lead provided a full explanation of the study and emphasised the optional, voluntary, confidential and anonymous nature of participation. It was made clear that participation would not affect any future services and/or community benefits needed or received. All participants were given the opportunity to ask questions and for further explanation. The study's consent form (see Annex 6) was presented, explained in detail and read aloud for illiterate participants. The contact details of the WFP national focal point for the research was included on each consent form and provided to community leaders, governmental officials and industry representatives for their records. A copy of the consent form was provided to all participants upon request.

Particular attention was given to the consent procedure at the start of each adolescent workshop. The study and workshop objectives and the individual's participation were explained in detail to their caregiver (many of whom also participated in focus group discussions) and who were asked to complete the study's consent form. In a small number of cases where the data collection took place within the school grounds and the caregiver was not available to sign, the head-teacher gave consent for the adolescent's participation in the activity. The study and their participation were explained to the adolescents in an appropriate and accessible manner. They were asked for their assent and given the opportunity to complete the consent/asset form.

All research participants, including the adolescent participants, gave informed consent/assent by signing the consent/assent form or by giving verbal consent that was recorded. At the conclusion of fieldwork, all consent forms were retained in hard copy by WFP.

Data Management, transcription and translation

Interviews, FGDs, and adolescent workshop discussions were recorded using a digital voice recorder, with the exception of 14 stakeholder interviews, either at the participant's direct request, or where the recorder was not available. Detailed notes were taken during each data collection session (and particularly during the interviews that were not recorded). At the conclusion of each day, notes were transcribed and data compiled for review and verification. All data were stored securely on a password protected laptop and backed up on a portable hard drive each day.

At the end of data collection, the audio recordings of all the data collection sessions were transcribed into English. Anonymised transcripts were produced in Microsoft Word. The transcripts were reviewed for accuracy and were cross-referenced with the research team's field notes. Any areas of inconsistency were resolved after an additional review of the original audio file.

All technology interviews were completed on paper. Hard copies were collected and at the end of the fieldwork, entered the data into Excel, cross checking the entries against the original paper copies.

Data analysis

Preliminary analysis of data was conducted throughout the data collection process and the research team presented initial findings to key WFP staff and government stakeholders during debrief sessions at the conclusion of the fieldwork.

The lead researcher conducted full analysis of all qualitative data using thematic analysis. Dominant themes were identified through the systematic review of interviews, FGDs, workshops and observation notes. Salient concepts were coded and their occurrence and reoccurrence labelled by hand. The emerging trends were critically analysed according to the research objectives. Particular sections of *ad verbatim* narrative were used to build case studies and included in the report to ensure the participants' voice was captured and maintained. The demographic data of participants and technology interview data was analysed using Excel. The analytic process was systematic and transparent, and all raw data were made available.

Methodological limitations

The study had a wide geographical scope, which combined with a limited timeframe, budget and human resource, posed a set of challenges. Throughout the process, the team sought to mitigate the impact of these by employing a carefully developed pragmatic methodology and efficiently utilising resources available.

In qualitative research, there is always a risk associated with misinterpretation and the possibility that participants provide what they perceive to be socially-correct responses, or withhold sensitive information. Attempts were made to mitigate these risks by the research team working closely together to plan translation styles in advance and decide how to best capture colloquialisms, idiomatic expressions and jargon. Careful phraseology was used when posing questions. Sections of narrative were back translated to confirm or clarify participant statements. In addition, the research team was not known to the communities or individual respondents in advance, and through the careful consent process, a 'safe-space' for sharing ideas was created. Participants were encouraged to speak openly and through constant debrief discussions the research team did not feel that socially-correct answers biased the findings. Interview and discussion frameworks allowed similar questions to be asked in multiple ways in order to triangulate responses across relevant stakeholders. Observational data compiled during photowalk activities in the community also served as a method of verification (e.g. the condition of crops, presence of food carts etc.).

In all three sites, it was necessary for the research team to discuss the most appropriate way to convey the concept and period of adolescence to community-level respondents. There was not always one word that fit the description of adolescent. Circumlocution was required to articulate the research questions in the local languages, and due to the sometimes lengthy descriptions that were needed to convey meaning, interlocutors may have been predisposed to provide answers based on the descriptions provided by the translators. This was addressed during data analysis by comparing community-level descriptions of adolescence to county and sub-county-level interpretations of local sentiments regarding the concept of adolescence (e.g. 'puberty') in order to mitigate any biases introduced when asking questions regarding local interpretations of 'adolescence'.

In Kenya, there is a diverse landscape of governmental and I/NGO partners delivering community-based health services for women and children and it was not possible to engage all partners in the study. As far as possible, stakeholders were mapped in advance of data collection, and the WFP Country Office was able to prioritise key partners for inclusion in the study. National-level governmental stakeholders in particular were difficult to engage at both national and county-level, partly due to the data collection period occurring just before the initial round of the 2017 Kenyan elections, for which many travelled out of Nairobi to their home counties. Nevertheless, the Ministry of Health NDU team were able to secure an official letter to mobilise interviews with the key sectors identified.

The limited time and resources for the study resulted in engagement with stakeholders at county and community levels being prioritised. The maximum possible number of interviews, FGDs, workshops and interviews were conducted at each fieldsite given the time and operational constraints. Accessing some of the fieldsites was challenging, particularly in Samburu. Two cases of extended gun-fire from cattle-raiding delayed fieldwork by one day. Furthermore, due to the limited field time, technology interviews were only completed in one ward of Meru (Mikinduri). It was advised by the local research partner not to include the photowalk activity in Nairobi due to security concerns related to carrying cameras in or near informal settlements. As such, an extended version of the graffiti wall activity (described above) was incorporated into the workshops with older adolescent girls.

The research intended to capture the voices of both in-school and out-of-school adolescents. When in the field-sites, these two groups could in fact not be so clearly differentiated. The majority of primary school-age children were found to be registered as 'in school', however in reality, did not regularly attend due to other conflicting issues including family/farming/income-generation responsibilities. This resulted in a number of workshop groups containing more 'in-school' than 'out-of-school' participants, when in reality the delineations are more fluid. Similarly, the research partner in Meru used their back-to-school programme networks to recruit participants, which led to them being listed as 'in-school' but being able to reflect on their recent experiences when 'out-of-school'. In order to ensure both perspectives were comprehensively captured in the study, extra probing questions were incorporated into the workshop structure to explore participants' experiences when in and when out of school.

The saturation of findings indicate the data are likely applicable to areas with similar socio-economic and cultural backgrounds, and which share similar characteristics (low-income informal settlement/surrounding urban areas, pastoral ASAL and agricultural cash-crop livelihood zones). However, given the sample size and the socio-economic and cultural diversity of Kenya, results cannot extrapolate to a whole-country context. The findings were broadly corroborated by key stakeholders, the literature reviewed and also by the situational analysis report.



1. Defining and experiencing adolescence

Adolescence is commonly understood as the life stage between the end of childhood and the beginning of adulthood (Kaplan, 2004). 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 differs widely across cultures (Steinberg, 2014).

In discussing adolescence with different stakeholders in Kenya, it was clear that conceptually, there was a distinct period of life that marked the transition from childhood to adulthood, although how that transition was defined, what triggered the entrance and exit between life stages, and the terminology used to describe it varied across research sites. Differences in markers between male and female adolescence were highlighted, with boys often perceived to have a longer interim period between childhood and adulthood than girls. There were marked disparities between community-level definitions of adolescence and the terminology adopted at the national level. Age was rarely the key marker of different life stages at the community level, rather socio-cultural changes such as circumcision, marriage, parenthood, independence and responsibility were more often referred to. Markers of adulthood were observed in individuals considerably younger than 18 years old, the legal age of adulthood in Kenya.

National and county level definitions of adolescence

Kenya's Constitution recognises the rights of all children, understood as those persons between the ages of 0-18 years. At the age of 18, Kenyans are thought to be adult and are entitled to receive a national ID card. There is no specific nationally agreed definition for the adolescent age group in Kenya (UNICEF, 2014). In-line with international recognition of special groups, legislation makes exceptions for adolescents in specific situations who are considered 'mature minors', including adolescent parents, pregnant adolescents, married adolescents and adolescent household heads (ref needed). Table 3 below outlines the range of categories persons aged between 10-19 years fall under according to government, NGO and private sector actors.

Table 3 – Definitions and terminologies relevant to the 10-19 year old adolescent age group

Institution	Terminology	Age
Ministry of Health	Adolescents	10-19 years
	Women of Reproductive Age	15-49 years
	Youth	10-24 years
Ministry of Education	Primary school student	6-13 years
	Secondary school student	14-17 years
Inter-Religious Council of Kenya	Youth	15-35 years
World Health Organisation	Adolescents	10-19 years
UNICEF	Early adolescence	10-14 years
	Late adolescence	15-19 years
Population Council	Early adolescence	10-14 years
	Late adolescence	15-19 years
Pathfinder International	Adolescent and Youth	10-24 years
Population Services Kenya	Adolescents	10-19 years
Well Told Story	Youth	15-24 years
Safaricom	Youth	10-24 years
County government	Primary school age	6-13 years
	Secondary school age	14-17 years
	Youth	15-29 years
	Reproductive Age	15-49 years
	Labour Force Age	15-64 years

County-level stakeholders engaged in the research used definitions in accordance to the national-level definitions. For both levels, definitions largely depend on sector. Social protection actors targeted 'youth' ranging from 10 years to 35 years. Health actors target 'adolescents' and/or 'Women of Reproductive Age' ranging from 10 to 19 years and 15 to 49 years respectively. Education actors target groups by their educational stage 'Primary Students' 6-13 years and 'Secondary Students' 14-17 years.

Community definitions

Participants in Nairobi County spoke Kiswahili, English and Sheng.²³ Terminology used to describe the 10-19 year age-group included the Kiswahili terms *kijana* or *vijana* meaning youth or young person and *balehe* meaning puberty; and *kameiva* meaning 'ripened' in Sheng. Many adolescent participants also used the English terms 'adolescent' or 'teenager' with which they were familiar through their English-speaking upbringing, through school and/or through television and movies. When discussing terminology, one research assistant explained '*Some things are much easier in English than Swahili*'.

Participants in Samburu County spoke both Kiswahili and Samburu. Terminology from the Samburu language relevant to the 10-19 age group included: *laiyok* used to refer to an uncircumcised boy; *ntoiye* for a girl before she is married; *lairitak* for a circumcised boy; and *nkolionto* for a pubescent girl. Participants also used the Samburu term *laram*, usually associated to the life stage between childhood and adulthood in goats. There was no easy or direct translation for the western definition of adolescence and no clear age parameters were linked to the terms described above. It was largely agreed that '*Ceremony is more important than the age in Samburu*'.

Meru County participants spoke both Kiswahili and Kimeru. Relevant terminology in Kimeru included: *mwiji*, meaning uncircumcised male; *nthaka*, meaning circumcised young male; and *mwari* or *muiritu*, meaning young woman passing through puberty.

Markers of adolescence

When community-level key informants were asked to describe this life period, a large number of common themes were identified across the three counties. A rich and textured description of 'adolescence' emerged, and age was not the dominant parameter of definition for the majority of participants.

According to caregivers and local influencers, this period of life is a time of change in physical appearance and the capacity '*to think*', including an increased knowledge of the wider world and being '*more aware of many things*'. It is a time defined by growing interest in material assets, and a greater personal agency to make independent decisions aside from the wishes of parents and other authority figures. This age group played a vital role in taking care of young siblings and children, but was also perceived to be a group that could '*bring a lot of problems*' including theft and alcohol-drinking (specifically boys) and pregnancy.

When discussing their own period of life, adolescent participants themselves highlighted a number of key themes.



'This is me'. Drawing, 10-14 adolescent workshop, Meru.

²³ Sheng is a slang language popular amongst young people Kenya. The term 'Sheng' is coined from the two languages that it is mainly derived from: Kiswahili and English. Although the grammar, syntax, and much of the vocabulary are drawn from Kiswahili, Sheng borrows from the languages of some of the largest ethnic groups in Kenya. Most conversation amongst youth moves between the different languages.

Physical change: Adolescents across the three sites spoke about physical changes, including deepening voices, pimples, pubic hair, broadening chests (boys) and developing breasts and menstruation (girls). These changes were reflected in the self-portraits drawn by adolescent girls in their workshops. In Nairobi, Ngomongo specifically, a girl's adolescence was defined by her fertility, *'A teenager in Korogocho means somebody who is able to have a child'*.

Cognitive change: Most adolescent groups explained how their *'thinking capacity'* was superior to that of younger children, and noted a shift towards increasing consideration for their family's wellbeing. They also highlighted changes in how they related to their social world and how others viewed them, influencing feelings of pride and shame (described more below).

Ceremony: Adolescents in Samburu explained how, at around 15 years of age, a boy is circumcised and becomes a *moran*, taking on responsibilities for herding the animals and protecting his community. For females, circumcision and marriage usually take place consecutively, from 12 years of age onwards.²⁴ In Meru, circumcision was described to be common for boys and was reported to happen after completing Class 8 (the last year of primary school), highlighting some overlap between traditional and modern indicators of life-stage.

Household and community responsibility: The older girls in Ngomongo, Nairobi felt that a two-way relationship with their family defined this life stage, *'The work of the parents is to fend for me and I help with the chores that my parents don't do. So even if they're providing me with food, I am also helping them with something'*. Compared to girls, boys were seen as having relatively few responsibilities, and local stakeholders often labelled them as *'idle'*. The perception that *'Boys do not do anything for real'* was frequently expressed by adolescent girls. In Meru and Samburu, the list of chores for younger and older adolescent girls included fetching water and firewood, washing clothes and the dishes, sweeping the house and taking care of siblings. In Meru, the older boys reported a reduction in their household responsibilities after circumcision, with their sisters having to take on their share of work. In Samburu, *morans* had significantly greater community responsibilities following circumcision, including herding and guarding cattle and protecting the community.

Dependence on caregivers: Adolescent girls and boys in both Nairobi and Meru concluded that they still dependent on their families for many things. Navigating the move from dependence to independence was linked to experimentation and associated risky behaviours such as drug and alcohol abuse. In Nairobi, a transition to independence was also seen in decision-making processes voiced by the older girls, *'I can decide I am not washing utensils and I don't, but a child cannot decide that'*. In Meru, the older adolescent girls were keenly aware of not being able to make all their own decisions yet, whereas boys felt they were expected to make their own decisions, but the environment around them did not always facilitate this (e.g. wanting to work, but not having a government ID card to help with applications). In Samburu, young brides transitioned from dependence on their birth parents to dependence on their husband and mothers-in-law. *Morans* in Samburu felt a societal expectation to demonstrate greater independence, and as one youth leader in Ndoto concluded, *'Everyone perceives when you are at that age you are able to take care of yourself'*.

Opening versus closing social world: Across sites, progression from younger adolescence to older adolescence signaled a change in interactions with a person's immediate social space. In Nairobi, adolescent girls self-imposed a curfew of 7.30pm in the evening due to risk of theft and sexual violence, but described boys as having more liberty to move around. In Meru in particular, boys were given more freedom to expand their social interactions, whereas the social world of girls became more confined. As a

²⁴ Female circumcision has been associated with obstetric and gynecological complications as well as long-term effects on women's wellbeing (Berg et al., 2014). The KDHS reports that 11.4% of 15-19 year old girls had been circumcised, with an emerging trend over time to circumcise girls at younger ages. The highest rates of female circumcision were reported in Samburu (57%), followed by Meru County (17%) and Nairobi (5%) (KDHS: KNBS, 2015). In Samburu, implementing partners and county-level officials discussed the challenges they faced in trying to combat this cultural practice, particularly in the remote areas of Samburu North where the tradition was stronger. The KDHS reported that across the county, 72% of women and 95.3% of men believed that female circumcision was required by their community (KDHS: KNBS, 2015).

local leader in Meru explained, *'Girls are not allowed to mingle. Once we see signs of adolescence we say they are grown. Boys are not so restricted, once they are circumcised they don't need their father's consent to go to town to watch TV'*. Having said this, the *moran* group was noted as particularly hard to engage and described as a *'secretive'* group.

Pride versus shame: This emerged as a key emotional conflict for adolescents in all sites and most keenly articulated in expressions about their appearance, and how it related to societal evaluations of them. Similar sentiments were evident in relation to food experiences, and in their social media use, in particular in urban Nairobi, where participants lived in close proximity to relative wealth and privilege (discussed further below).

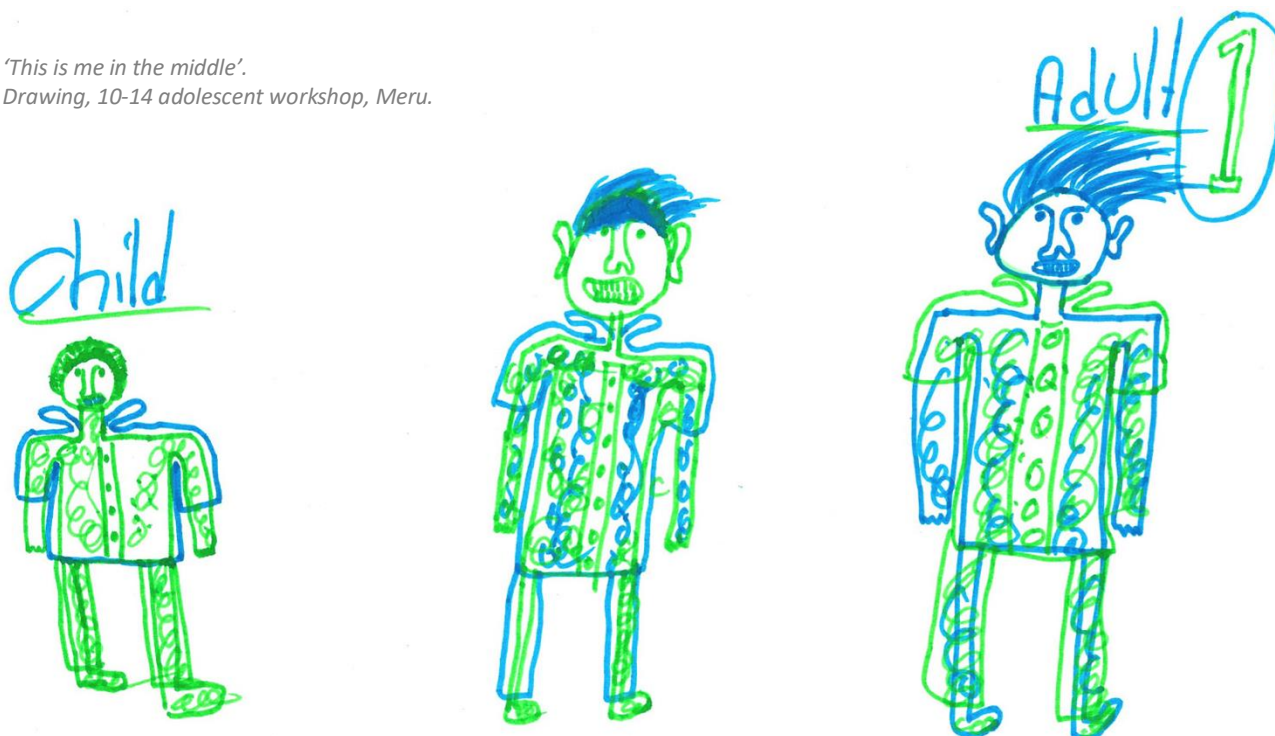
Gaining assets: In Nairobi, older boys in particular mentioned the importance of gaining assets during this life stage. As agreed during one of the group discussions, *'At times you can see that your friends are smartly dressed and maybe you don't have any good-looking clothes. You also have to put some effort and if its proving to be impossible, at night you go and look for copper from the washing line, and if there are good-looking clothes you take them too'*. The drawing below by an adolescent boy in a workshop in Meru depicts a child, himself in the middle, and an adult, each wearing a more elaborate outfit.

In both their discussions and drawings, all adolescent participants were able to differentiate physical, behavioural, social and cognitive features of children from those of adults, and discuss how they self-identified.

In both Ngomongo and Utalii in Nairobi, there was common agreement that childhood is short. This was partly due to how they were treated by others (*'Most parents do not see their children as children'*) but was also influenced by negative self-perceptions (*'I am embarrassed to be a child'*), and to some degree was related to levels of familial responsibility. As one NGO worker concluded, *'If you call them children they feel undervalued and unrecognised for what they have to do'*. Key indicators that marked the entrance to adulthood were identified by participants as marriage, having children, gaining responsibility and independence and acquiring an ID card at the age of 18 years. As part of the workshops, participants were asked how they would describe themselves, or place themselves socially according to their age. However, key influencers noted that some adolescent mothers revert to becoming even more dependent on their parents, with the experience making them realise their age. The younger boys and girls in both Utalii and Ngomongo felt they were *'katikati'* (a Kiswahili term meaning 'in the middle'). The older boys and girls in

'This is me in the middle.'

Drawing, 10-14 adolescent workshop, Meru.



Ngomongo also placed themselves as *'katikati'* or as *'mtoto'* (children), whereas the older boys and girls in Utalii placed themselves either as *'katikati'* or *'mtu mzima'* (adults).

In Ndoto, Samburu, the key indicators that adolescents identified as marking their entrance into adulthood were circumcision (boys), circumcision and marriage (girls), motherhood (girls), roles and responsibilities in the house and wider community, cognitive ability and physical changes (size and sexual development). Numerical age was seen as less important when discussing boundaries of life stages, particularly with regard to women, and particularly in the more rural areas. In Ndoto, stakeholders explained, *'A lady has no age'*, because she can be married or become a mother without age being a barrier. *Morans* saw themselves as adults, because of the high degree of responsibility they had in their communities. Boys who were circumcised but not *morans* due to school obligations also saw themselves as adults, having undergone circumcision and because of the subsequent expectations the community had for them. Defined age-sets that pass through different life stages together were more important for boys than a single person's age. Married girls were more likely than unmarried girls to identify themselves as being adults because of the fact they had children and were no longer growing. In Samburu, strong gender differences were apparent in understanding the interim stage before the onset of adulthood. Both adolescent girls and boys felt that boys grow up more slowly than girls, with more chance to be independent. As a youth leader in Ndoto concluded,

When girls are married there's nothing youthful there, just go to your house and live with your husband. But for male boys those who become warriors are youth because they then spend around 10 to 15 years without marrying, just moving around protecting the community, handling livestock. So you see they have that chance to be youth.

In both Mikinduri and Maua in Meru, workshop participants identified key indicators marking that a boy was entering adulthood as circumcision, gaining an ID card, leaving school and/or getting a job. As a marker of adulthood, age (turning 18 years) was more relevant for boys than to girls, because it was perceived as being necessary to have an ID card for them to find work. It was thought that girls became adults when they got married, became a mother and/or started work (discussed further below). Older, unmarried girls without children, and those still in school were identified as children, or as being 'in the middle'. In general, motherhood was a more contentious or fluid indicator of adulthood, with adolescent mothers and their caregivers feeling they were a *'child with a child'*. The majority of workshop participants in Meru agreed that they felt they were in an interim period between childhood and adulthood, most often describing themselves using the Kiswahili term *'katikati'*.



2. Food and Nutrition

The chapter is structured around three sections: available food and food sources; food responsibilities; and food status and aspirations.

Available food and its sources

Adolescents were exposed to different food choices across the three sites, and sources of food also varied. Overall, adolescents' diets were unhealthy, limited and uniform.

Informal work and 'hustling' was described as common-practice in Nairobi, particularly in the informal settlement of Ngomongo, where people were often occupied throughout the day looking for work. Caregivers of adolescents asserted that *'Money is scarce and so we have to hustle'*. The culture of food in Ngomongo reflected this lifestyle: disorganised, uncertain and unregulated. When describing the foods that were available to them, adolescents simply stated, *'All the rejects are sold here'*. The most commonly described food was *anyona*, the off-cuts of factory bread that are bagged and sold on the roadside. *Chafua*, meaning 'dirty', is a soup made from the juice of beans (without the beans themselves), commonly eaten with rice and bought from the road-side. The most commonly eaten vegetables were collard greens or *sukuma wiki*, which means 'push the week' due to their cheap-price and ability to keep families fed when money for food is scarce. Adolescents described that *'premature eggs'*, (eggs taken from slaughtered chickens that did not have shells or albumin) which they also referred to colloquially as *'abortion'* were sold in the market. Certain chicken parts were also described as part of this narrative of rejected food that fed the capital's slums. As one caregiver in Ngomongo explained, *'You might get chicken feet sold in Kibera, the neck sold in Ngomongo, the head in Kayole. The good bits go to the rest of Nairobi'*. Adolescents were reported to be more vulnerable to buying poor quality foods because they reportedly, *'don't care'* and will *'eat anything'*. Table 4 below records the foods that adolescent participants across the field sites identified as being available in the areas where they lived.

In Utalii, participants identified the most common dishes to be *githiri* (a mix of maize and beans); *mukimo* (maize, mashed potato, vegetables); *muthokoi* (beans, mashed potatoes, vegetables); and *kienyeji* (vegetables cooked with cream, milk or ghee). Food in Utalii was more varied than that found in Ngomongo, and participants did not mention eating *anyona* or *chafua*.

In both sites, a large proportion of food was bought from road-side stalls, and only a few dishes were described as being truly home-cooked. Food prepared at home was usually for the evening meal, with the main staple being *ugali* (maize flour, water and oil). Markets were active sources food for adolescents, and those in Utalii also reported sometimes buying from supermarkets.

Food was described as the largest expenditure of household income in Nairobi. As a religious leader in Ngomongo asserted, *'Although you're working hard, whatever you earn you spend on food'*. One food vendor in Utalii selling *girthiri*, *muthokoi* and *mukimo* explained she had over 200 customers a day, mostly mothers buying food for their families, or *'young people'*. In discussing food vendors, an adolescent girl in Ngomongo explained,

You might find that githiri is packed in a paper bag and costs 10 shillings [1 USD]. If you take your time to cook githiri, you must first use charcoal which is expensive. If you want to cook chapatti, the flour is expensive and also the cooking oil is expensive. So I think she [the vendor] is the only person doing this and the profits she gets she's able to invest more back into the business. So people in the community, instead of starving during lunch time, go and buy her food because it's what they can afford. It's easy, it's right there and it's pocket friendly.

Table 4 – Foods participants reported as being available in the areas they lived

		Nairobi		Samburu	Meru
		Ngomongo	Utalii	Ndoto	Mikinduri/Maua
Staples	Bread (inc. <i>Anyona</i>)	✓			✓
	Rice	✓	✓	✓	✓
	Beans	✓	✓	✓	✓
	Maize	✓	✓	✓	✓
	Maize flour	✓	✓	✓	✓
Fish and eggs (eaten only occasionally in Nairobi and Samburu)	Premature eggs	✓			
	Normal eggs		✓	✓	✓
	Fingerlings	✓	✓		
	Fish-heads	✓			
	Fish balls		✓		
	Nile perch		✓		
	Tilapia		✓		
Mud fish		✓			
Meat (eaten only occasionally in Samburu)	Chicken (whole)			✓	✓
	Chicken feet	✓	✓		
	Chicken neck	✓			
	Chicken head		✓		
	Chicken's intestines		✓		
	Cow			✓	✓
	Cow's intestines		✓		
	Sausages	✓	✓		✓
	Goat		✓	✓	✓
Fats	Oil	✓	✓	✓	✓
Other animal products	Milk			✓	✓
	Blood			✓	
Vegetables	<i>Sukuma wiki</i>	✓	✓		✓
	Tomatoes	✓	✓		✓
	Onions	✓	✓	✓	✓
	Cabbage	✓	✓	✓	✓
	Sweet potato	✓	✓		✓
	<i>Irish</i> potato	✓	✓	✓	✓
	Maize	✓	✓		✓
	Carrots	✓			✓
	Green grams		✓		✓
	Peas		✓		✓

(Table 4 continued)

		Nairobi		Samburu	Meru
		Ngomongo	Utalii	Ndoto	Miikinduri/Maua
Vegetables (continued)	Garlic				✓
	Arrowroot				✓
	Yams				✓
Fruit/Nuts	Mangoes	✓	✓		✓
	Avocadoes	✓	✓		✓
	Oranges		✓		✓
	Bananas		✓		✓
	Apples	✓			✓
	Wild fruits			✓	
	Peanuts				✓
Pre-prepared road-side meals/snacks	<i>Githiri</i>	✓	✓		
	Beans	✓	✓		
	<i>Chafua</i>	✓			
	Rice	✓	✓		
	Chips	✓	✓		
	Sausages	✓	✓		
	<i>Chapattis</i>	✓	✓	✓	
	<i>Mandazis</i>	✓	✓	✓	
	<i>Muthokoi</i>		✓		
	<i>Mukimo</i>		✓		
	<i>Kienyeii</i>		✓		
	<i>Bhajji</i>		✓		
	Shop-bought snacks	Biscuits			✓
Sweets				✓	✓
Cakes					✓
Soda					✓

Adolescents in Ngomongo described the common practice of scavenging food from the dumpsite, trading hygiene and personal safety to acquire food, from as young as 8 years old. In one workshop, a girl drew the dumpsite (see also image below) and explained,

We get food from here, cakes, chicken, chips, you get them all from here. We don't even cook the food, we get it already cooked, 'ready-made'. When you go there, you don't have to pay for the cake or the chicken, you just get them easily. The reason that we eat this food is because we do not have food back at home. That is why we go to the dumpsite. It is not as if we have food at home, and go to the dumpsite. No, we go there because we are starving. And maybe we have no one to bring us food, we only have our father who is the bread winner. So, when we go there, we can get food for ourselves, the food that is there.



'We are different people, living by different standards. We are in slums while they are living well. There is no need for us to allow food to be thrown away while we are starving. We just have to eat it...'

Drawing, 15-19 adolescent workshop, Nairobi

Having collected food from the dumpsite, the adolescent girls reported, 'We don't wash it, we just wipe it', asserting that they rarely became ill because 'Our stomachs have adapted to it'. This practice was only described in Ngomongo, not Utalii. There had been a dumpsite in Utalii previously, but in an example of urban regeneration it was transformed into a market place.

In Ndoto, Samburu, food could be purchased from markets and the trading centre but the major food source was the community's livestock, mainly milk and meat from cattle and goats (see Table 4 below). This was described to be particularly common in Ndoto, where there was minimal agriculture. The high value attributed to livestock was reflected across participants, and *morans* who were engaged in the research described the lengths they went to to protect their livestock, prioritising the wellbeing of their animals above their own. As one *moran* explained, 'Sometimes when you are watering animals, at times the well is too deep such that seven people have to climb in there to get water for the animals. As we are getting water, an animal can fall down the well injuring itself'.

Although ceremonies such as circumcision and marriage were only held a few times a year, they were viewed as an occasion when everyone, regardless of personal wealth, could eat meat. The animal(s) slaughtered during the ceremony would be butchered and particular cuts of meat assigned to according to age and gender. A local leader in Ndoto explained,

For boys they take the steak. For the warriors, they take the ribs and also the other type of meat inside the body (the heart and the meat attached to it). Young ladies, before they are married, take the back of the animal and married women take the intestines. So everybody has their own share.

Beans were the a commonly referenced source of protein, with eggs available to families who kept chickens. Meat was consumed rarely, with participants suggesting they ate meat from once a month to once a year. The daily diet listed suggested an over-consumption of certain food groups, particularly starchy carbohydrates and adolescents described the monotony of their diets, which they were 'bored' with. Diets were described as more limited in areas further from the trading centre, which received a lorry delivery of fruits and cabbages once a week. Table 5 records the food stuffs most commonly eaten by adolescents throughout the day.

In Meru, the majority of food-stuffs in both Mikinduri and Maua were purchased from the local market. Crops included bananas, maize, beans, cowpeas and peanuts, and in Maua, the primary crop was *miraa* (see Table 4 above). The majority of the crops were grown to sell and if feasible, a small portion of land would be reserved to produce food for the household. Few households were reported to have diverse kitchen gardens that included a range of vegetables, and were more focussed on staple foods. Maize flour from private milling companies is fortified and sold across Meru. Some families milled their own maize using local millers. Adolescents engaged in work were sometimes provided with food by their employers, for example on construction sites, and if they had money, then they also bought food from cafes or 'hotels' (restaurants). The main commonly consumed food included *githiri*, *mathoke* (mashed bananas) and *ugali* with vegetables. Local stakeholders explained meals are focussed on 'quantity, not quality.'

Table 4 illustrates that adolescents in Nairobi had greater access to roadside and pre-prepared foods, whereas adolescents in Meru had wider access to a range of vegetables and fruits/nuts, but also to shop-bought snacks. Adolescents in Samburu had the most limited range of food options, relying most on

Table 5 – Common food adolescents reported eating

		Nairobi		Samburu	Meru
		Ngomongo	Utalii	Ndoto	Mikinduri/Maua
Morning	Tea alone (with / without milk)	✓		✓	✓
	Tea with <i>mandazi/chapatti</i>	✓	✓		✓
	Tea with <i>anyona</i>	✓			
	Tea with bread				✓
	Tea with bread and spread (blue band, peanut butter etc)		✓		
	Tea with <i>githiri</i>		✓		
	Tea with leftover food from the previous night			✓	✓
	Porridge		✓		
	Soya porridge				✓
	Nothing	✓		✓	✓
Daytime	<i>Githiri</i>	✓	✓	✓	✓
	Rice and beans	✓	✓	✓	
	Rice and potatoes			✓	
	<i>Ugali</i> and meat		✓		
	<i>Ugali</i> and greengrams		✓		
	<i>Ugali</i> and <i>sukuma wiki</i>				✓
	<i>Ugali</i> and cabbage				✓
	<i>Ugali</i> with tea				✓
	<i>Muthokoi</i>		✓		
	<i>Mukimo</i>		✓		
	<i>Anyona</i>	✓	✓		
	Chips	✓			
	<i>Lochoro</i> only			✓	
	<i>Mathoke</i>				✓
	Nothing	✓		✓	
	Evening	<i>Ugali</i> and <i>sukuma wiki</i>	✓	✓	
<i>Ugali</i> and fingerlings		✓	✓		
<i>Ugali</i> and cabbage					✓
<i>Ugali</i> , <i>sukuma wiki</i> and fingerlings			✓		
<i>Ugali</i> , <i>sukuma wiki</i> and chicken feet			✓		
<i>Ugali</i> and <i>kienyeji</i>			✓		
<i>Githiri</i>					✓
Rice and cabbage		✓	✓	✓	✓
Rice, potatoes and meat				✓ ²⁵	
<i>Mathoke</i>				✓	

²⁵ Very rare, only eaten if afforded

(Table 5 continued)

		Nairobi		Samburu	Meru
		Ngomongo	Utalii	Ndoto	Mikinduri/Maua
Snacks	<i>Lochoro</i> only			✓	
	Blood			✓	
	Nothing	✓		✓	
	Tea	✓			✓
	<i>Mandazi</i>	✓		✓	✓
	Sausage		✓		
	Chips		✓		
	Fruit		✓		✓
	Soya beans				✓

staples and animal products, although the latter in their pure and complete form rather than select (and often undesirable) body parts as in Nairobi.

As highlighted in Table 5 (above), adolescents in Ngomongo, Nairobi and in Ndoto, Samburu reported going without food in the morning and also at times, without a mid-day meal. Those herding animals in Samburu were more likely to have a morning and evening meal only. Items such as tea, *ugali*, *mandazis* and *githiri* were common across all fileldsites. Certain food-stuffs were site-specific, such as *anyona* in Ngomongo, Nairobi, blood in Samburu and *mathoke* in Meru. Adolescents in Samburu had the smallest range of food options, particularly during the day-time. Meals cooked in Meru and at the roadside in Nairobi were more likely to include onions, tomatoes, and other extra vegetables like potatoes and carrots, which were usually unavailable in Samburu. Caregivers in Utalii reported that girls were more prone to snacking between meals than boys.

Food responsibilities

Adolescents were found to play a key role in their own and their households food intake, despite not always having access to important resources.

In Nairobi, the mother or main female caregiver was responsible for ensuring food was available, whilst the father or male household head, if still living with the family, was responsible for providing the money to purchase the food. With the absence of men, caregivers reported, '*nowadays women have taught themselves to go and look for money*'. Because of the hustling lifestyle in Ngomongo, adolescents were often responsible to fend for themselves, and source their own food, particularly during the day. Adolescents in Utalii reported comparatively less self-reliance in this way.

Participants confirmed that if a female family member is present, she is expected to cook. As one girl explained, '*I have a big brother, but if I am around, he cannot cook. If I am not there, then he cooks*'. Many adolescent participants described that they 'cooked' food, but used the term synonymously with heating-up food they had bought ready-made from the roadside, and during discussions about healthy and unhealthy food, some participants were only able to list dishes, rather than their ingredients.

In Samburu, whilst the male head of the household in Samburu was described as the main decision-maker and responsible for providing for the family, his wife or the main female caregiver was responsible for

sourcing food and feeding the family, a role described by one community leader in Ndoto as *'The kitchen manager of that budget'*. After marriage, adolescent girls and mothers can assume this role of preparing the food, whilst non-married adolescent girls were involved in buying food stuffs such as flour, oil, salt, maize and beans. Increasingly, female caregivers were recognised as also bringing in household income.

Food preparation in Samburu, as in Nairobi, was a role for female caregivers and adolescent girls, with the occasional help of younger adolescent boys. It was suggested that the recent drought had made mothers and female caregivers *'busier'*, thus placing a greater responsibility on adolescent girls, particularly in relation to caring for their younger siblings and preparing meals. One adolescent girl in Ndoto explained, *'Mother cannot stay at home to take care of the babies because of the drought, she has to go all over to find water so she can't be with the small children'*. The assumption was that boys did not cook if his sister or mother was present, at least until after circumcision when they need to take more responsibility for their own food preparation (discussed further below).

In both field-sites in Meru, the male head of the household was traditionally the primary income generator and has control of the household's money. His wife, or the main female caregiver, was responsible for purchasing food, but in recent years there has been a shift as women have assumed a greater role in earning money and have taken over responsibility for the whole household. Although adolescents may be sent to market to buy food for the household, the younger adolescents had the least control over sourcing food and described being mostly dependent on their caregivers. In contrast, older adolescents, particularly older boys, who were circumcised and out of school, were often told to fend for themselves. In a workshop in Maua, one adolescent boy commented, *'When you go to your mother she says you are old enough to look for own food'* and another agreed, explaining, *'If you don't go to school, you sort yourself'*.

As in the other fieldsites, the main female caregiver was responsible for preparing meals in Meru, often with the help of both younger and older adolescent girls who sometimes took the lead in preparing meals if they were not in school, or at the weekend. As in Samburu, the assumption was that boys did not cook, at least until after circumcision when they need to take more responsibility for their own food preparation.

In discussing their experiences, 'typical day-in-the-life' narratives of adolescents were built from the workshop participants' self-reported activities. The narratives therefore represent a composite character rather than any one individual, and reinforce the many similarities girls and boys from each location described in their daily life, most notably their food responsibilities and need for self-reliance.²⁶

Narrative 1 – Daily routine, 15 year old boy, Ngomongo, Nairobi

In the morning I wake up by 7am. I first wake my siblings, then I take breakfast which is usually strong tea, which is tea without milk, and I eat bread. This is the bread that is sold in bags on the roadside. After that it is my job to wash the utensils I used to make tea. After that I need to fetch water for my family and sometimes I have to wash clothes.

After doing these things it is time for me to play football with my friends. After playing football we have lunch. After washing utensils, I go to help my mother pick mangoes. After picking I help her sell the mangoes to make a little money. I come home and take a bucket shower with a little of the water I collected in the morning. I wait for dinner to be cooked by my sister. By 9.30pm I go to sleep.

²⁶ For further details of the use of composite characters in qualitative research see Narayan (2012) and Angrosino (1998).

Narrative 2 – Daily routine, 15 year old girl, Ngomongo, Nairobi

In the morning I wake up by 7am. I wash my face and then I take breakfast. Usually I will have tea and bread. After this I take my younger brothers and sisters to school. I go straight home and help my mother wash plastic bags she has collected from the dumpsite.

At 1pm it is lunchtime and I buy maize and beans from the roadside for 10 shillings [0.10 USD] and eat alone. I then go back to washing plastic in the river until 5pm. Whilst I am doing this, my eldest brother is at home, doing little. Then I go home, wash my siblings who will have walked home from school by themselves and take a shower myself because the water we wash the plastics in is not clean and has a foul smell. I then help the kids with their homework.

I go to buy vegetables in the market but must be home by 7.3pm when it starts to get dangerous for girls to be outside. I prepare dinner and then serve the family by 9pm. We eat together, I wash the utensils and by 9.30pm I go to bed.

Narrative 3 – Daily routine, 15 year old boy, Utalii, Nairobi

This is my weekend day. I wake up by 7.30am and take tea and bread spread with peanut paste. I immediately go to brush my teeth. After this, I study at home which I do for two hours. After fetching water, then I can go and play football with my friends. We go buy and eat ready-made vegetables and beans for lunch and then watch DJ Afro Amigo on TV at my friend's house.

Then I must catch up on more reading for school. After I go to the football pitch to mark white lines ready for the next match. I am paid something small for doing this. I go with my mother to shop for dinner. My mother cooks while we watch the news on TV at 7pm. If she is at work and not at home I can also cook as I know some things. When it is ready at around 7pm all the family who are at home eat together. Afterwards I sleep.

Narrative 4 – Daily routine, 15 year old girl, Utalii, Nairobi

I wake up by 8.30am, shower and make tea. Around 10am I will drink tea and have it with a chapatti bought from the roadside. I clean the house, wash utensils and arrange things. I then go out and find my friends, we walk around for a while. Around 1pm I go to buy chips to eat with some money my parents have given me. After that I rest at my place and use Facebook on my phone. I then go to play football at the youth football club until 6pm. I hang out with my friends after we finish playing. At 7pm I go to the market to look for food to buy, either ready-made or maybe some vegetables to prepare. I help my mother either warm up or make dinner. I chat from 9-10.30pm on Facebook and WhatsApp then sleep.

Narrative 5 – Daily routine, 15 year old unmarried girl, Ndoto, Samburu

I wake up at 7am, I take a bath and I prepare tea. I bathe my younger siblings and after this I wash all of our clothes. I go to collect water from the pump where I have to queue for a long-time. After returning with the water I go to collect firewood for my mother to sell. I then often visit friends or visit relative who are not well with my mother.

When I return home I prepare lunch which is maize and beans. In the afternoon, my mother is away searching for water and perhaps my father has gone to sell a goat for money, so I look after my siblings. We go collect the other goats in the evening.

I then go to the shop to buy food for dinner and prepare it with the help of my sister. I serve the food, my father has the most and then my mother, and my siblings and I take the least. After eating, I rest and then sleep by 9pm.

Narrative 6 – Daily routine, 15 year old married 'beaded girl', Ndoto, Samburu

I wake up in the morning, and first check the animals and milk my cows if they have produced. I walk 3km to the river to fetch water, bringing as much as I can carry. I then come back to light the fire and prepare tea, for now, because the cows are not producing much, we drink tea without milk. When I finish washing the utensils, I separate kids from the goats. When the goats leave home to pasture I go to fetch firewood.

I come back to wash my clothes and I sweep my house. My mother-in-law will ask to see me so I go to her house for some time. Afterwards, I return home and if I can I will heat oil and mix in the flour and water to make what we call 'lochoro' [a staple made of heating a mix of flour and water]. If food is not there, I do not eat. After sweeping the house, I go to the market to buy food. On return I milk my animals, then I cook supper, probably lochoro again, and serve it to my husband. He has been out all day with the animals so he is tired and hungry. We eat together when he returns from his duties. After this I will go to wash myself and sleep.

Narrative 7 – Daily routine, 15 year old community warrior or Moran, Ndoto, Samburu

When I wake up the first thing I do is milk the animals if they need to be milked. During dry season there are no animals to be milked. Then I take tea and eat food which can be milk if available, if not I eat lochoro and go out to look after the animals the whole day. In the dry season you need to take them to far places to find pasture and even dig them wells to get water.

In the evening I come back and fix the fencing around the village. If there is food I eat, if there is no food I will sleep without eating. Sometimes if the cattle are at home and there is no food you need to pull blood from the neck of the animals to drink instead. We do this when times are hard. If there is no milk to mix with the blood, you take it without.

When an animal goes missing we are the ones to run all over at night to look for it. Otherwise we sleep outside to keep the community secure from our enemies, attackers or wild animals like hyenas and leopards.

Narrative 8 – Daily routine, 15 year old boy, Mikinduri, Meru

I wake up by 7am and I take a bucket shower with water left from yesterday. I drink tea and eat some bread that my sister has helped prepare for me. I fetch water and after this go to feed the cows. I go to school at 7.30am and we break by 9.30am. At 1pm I come home for lunch, usually of maize and beans, as we have no meals served at school. I go back to school and have classes until 4.10pm. I come home by 4.30pm and fetch water again.

I might get sent to the market around 7pm to fetch something. I then wait for my mother to cook dinner and do my homework. The food will depend on what we have from the garden or the market, but I hope it is not bananas as usual! We eat together as a family with my mother, father and siblings at about 9pm and then I go to sleep.

Narrative 9 – Daily routine, 15 year old girl, Maua, Meru

I wake up at 6.30am and go to the shamba [farm or plantation] until after 10am. Then I go home to look for tea, but if there isn't any, I go back to the shamba. If it is there then I take tea with food leftover from the night before. I go back to work in the shamba until 1pm and then come home for lunch and I rest for about 20 minutes. After that I take manure to the shamba in a wheelbarrow and sweep up.

Between 4pm and 5pm I feed the goats and on the way home I fetch water. After showering with water my sister has collected earlier in the day, I either help my mother cook, or cook with my sisters. We usually eat ugali [staple foodstuff made from water, maize flour and oil] with tea. It is cheaper to buy tea and sugar than to buy cabbage²⁷. After eating, I sleep.

Narrative 10 – Daily routine, 15 year old boy, Maua, Meru

Because I take care of the household, I have to wake up early at 5am. At this time people are usually awake, so the ones heading off to work leave clothes for me to wash. I do menial work like washing clothes to get paid. Afterwards I go to a local café and take tea and a mandazi [fried dough]. I then go back to the market and do other small jobs like sacking potatoes and charcoal. From 10am, I help out the stall owners put up their clothes to sell and help them in the market until about 1pm.

By now I have some money, so I go home and give my mother the money, hopefully around 100-150 shillings [0.95-1.45 USD]. I fold the clothes I have washed and go back to the market to return them to the owner. We usually buy lunch from the market, which is usually something like chapatti or roasted maize, around 3pm. I also help the stall owners close up and at about 6pm I head back home. We eat supper, either me and my family, or me and my friends, at around 7pm. Usually the food my sisters and mother cooked for lunch is the food we eat for supper. After that, I go to sleep around 9pm.

Food status and aspirations

A number of strong themes emerged around food status, motivations behind food choices and food aspirations (see Table 6 below).

In Nairobi, the comparison between Ngomongo and Utali highlighted the correlation between food quality, choice and social status. As noted, adolescence in Nairobi is experienced as a time for connecting with the

²⁷ Although it was not possible to verify this at the market level, this was a direct quotation from an adolescent participant

Table 6 – Main food sources, responsibilities, status and aspirations per age group and location

		Main food sources	Food responsibilities	Food status and aspirations
Nairobi	10-14 years	Road-side stalls, market, shops, dumpsite (Ngomongo)	Sourcing and preparing food for themselves and the household (females, occasionally males)	Good quality food and a varied diet that indicates social status. Foods that have taste
	15-19 years	Road-side stalls, market, shops, dumpsite (Ngomongo)	Sourcing and preparing food for themselves (females and males); the household (females)	Good quality food and a varied diet that indicates social status. Foods that have taste and are 'foreign'
Samburu	10-14 years	Market, trading centre, livestock	Sourcing and preparing food for themselves and the household (females, occasionally males)	Familiar foods but novel from the ordinary diet, and with taste. Animal products
	15-19 years	Market, trading centre, livestock	Sourcing and preparing food for the household (females); for themselves and their peer group (males)	Familiar foods (<i>morans</i>), animal products, novel and 'foreign' foods (in-school), and with taste
Meru	10-14 years	Market, shops, land 'kitchen gardens'	Preparing food for the household (usually females)	Novel foods from the ordinary diet. Filling food with 'energy'. Traditional foods
	15-19 years	Market, shops, land 'kitchen gardens'	Sourcing and preparing food for the household (female); for themselves (males)	Foreign, 'fashionable', foods, novel from the ordinary diet. Filling food. Snack foods eaten socially

world, becoming socially aware, and gaining assets, status and pride. All had particular expression through food.

With increased exposure to media and other societal changes, food is no longer regarded as a means of sustenance, but is also imbued with social significance linked to status. In Ngomongo and Utalii, the social significance of food is thrown into sharp relief as adolescents recognised that they live in one of Africa's most developed cities but are themselves entrenched in incredible poverty. In discussing their food aspirations, adolescents listed desired foods including cakes, pizza and other items perceived as '*rich people food*', even if they could only acquire them from the dumpsite, where food is brought from airports, rich estates and hotels. As one adolescent girl in Ngomongo explained,

The food that we eat is not bad food, because the food comes from the rich people. The food comes from the biggest estates. There is no need for us to allow food to be thrown away while we are starving. We just have to eat it...

Yes that we have different people, living in different standards. We are in slums whilst they are living well. They don't live like us, we don't eat balanced diet, we don't eat fruits etc. we live differently according to our standards.

Being linked to wealthy Nairobi through geographical proximity and through objects on the dumpsite, adolescents had seen and literally tasted the 'other side'. A sense of shame and injustice was strongly inter-twined with descriptions of their dumpsite practices, and adolescents were aware that they were making an emotional trade-off to source food.²⁸

²⁸ The 2017 election campaign brought '*Githiri Man*': a photograph taken of a man queueing at a polling station, holding a plastic bag full of roadside-bought *githiri* (maize and beans described above). '*Githiri Man*' sped around the internet in August 2017 with many sharing the image on social media and photo-shopping his image into a number of iconic Hollywood movie scenes. More than simply comic relief during a tense election period, '*Githiri Man*' was seen as a 'hero' for his commitment to casting his vote and the food he was carrying signalled his status as an 'ordinary man'.

In Samburu, the value and emotional connection and psychological identification of communities with their livestock, particularly cattle, was clearly evident. For many adolescents, the care they provided livestock provided a structure to their day and for *morans* was the root of the societal respect bestowed on them. In discussing their food choices, participants expressed boredom for their uniform diets and wished for more variety in their diets and for food that gives them energy. Several *morans* and married girls confirmed they preferred *'The foods that are available and I grew up liking'*, whilst adolescents in-school discussed their aspirations for spaghetti, chapatti and rice, all foreign foods that were novel and different to their normal diets. Such differences in food aspirations may exemplify the relative impact of globalisation that being embedded in the education system brings, versus being embedded in traditional and more locally focused systems. It also highlights the limited aspirations adolescents allow themselves in the current reality of drought, as depicted in the photographs adolescent girls took during the study (see below photographs that show dry land around their village and empty houses whose occupants had migrated after their livestock died).

Similarly, adolescents in Meru were expressive about the foods they preferred, prioritising their desire for foods that were novel, fast, energy-giving, filling and *'fashionable'*. Yet *'traditional'* knowledge about healthy foods, passed down orally between generations, also had significance for adolescents. Adolescents in Nairobi also expressed preference for *'fueling'* food to give them energy. One girl in Mikinduri concluded the food adolescents preferred was food that was not *'ordinary'* but was *'hard to find'* including chapatti, meat and rice. Their least favourite foods were those they ate *'all the time'*, particularly bananas. Social status was closely linked to food experiences for this age group. Adolescent boys admitted to feeling shame when they had to admit they had eaten food from the night before for their morning meal. Conversely, buying a *mandazi* or pastry to share with others during break time at school motivated many to participate in income generating activities. A local-level stakeholder explained, *'There is that feeling that you have grown to belong and you want to eat what others are eating'*. Status came from eating food seen to be foreign including sodas, biscuits and other packaged food, and in this regard status was prioritised over any perceived health factor. An adolescent boy in Maua asserted, *'Spaghetti makes you feel special, you don't get satisfied for long, it just makes you feel classy'*, whilst an adolescent girl in Mikinduri concluded, *'We know those foods are not healthy, they are only for desire'*. In their photowalk activity, adolescent girls in Meru clearly documented their preference for packaged 'junk' or 'fast' food (see photographs below).



"Dry Place"

Ndoto, Samburu County



"Homes are Empty"

Ndoto, Samburu County



"Cakes, bread: We eat them as a snack"

Mikinduri, Meru County



"These are sodas and they are taken with a snack"

Mikinduri, Meru County

3. Factors affecting adolescent nutrition

A number of interrelated factors were found to determine adolescents' access to adequate and healthy food: household economic status; income generating activities; social norms and restrictive food practices; food knowledge; poor educational attainment; climate; security; sexual and reproductive health issues; and service delivery issues.

Household economic status

Low household economic status emerged as a significant factor underlying access to nutrition for adolescents.

In Nairobi, adolescents in both sites agreed, *'We just afford the unhealthy but cheap food'*. A lack of money also contributed to food insecurity, for as one adolescent girl explained, *'When your dad is the only provider in the house, if he comes home with 150 shillings [1.45 USD] and the money is used for supper, nothing will remain for breakfast or lunch so you have to wait for him to come back the next day'*. The cost of food was identified as a barrier to eating sufficient food, and the option of choosing nutritious food was a luxury most participants could not afford. In both sites in Nairobi, *ugali* was a staple component of the daily diet, but in response to the recent and rapid rise in cost of maize flour across the country, caregivers in Ngomongo explained *'We just taste, we don't get satisfied, we just taste'*. The impact of the price of maize was felt but not to the same degree in Utalii, and there several adolescents suggested that *'worrying'* about food was a concern for their parents, not for them. As described above, adolescents in Ngomongo described the common practice of scavenging food from the dumpsite, trading hygiene and personal safety to acquire discarded food.

In Samburu, where the drought had had a negative impact on livestock, the main source of revenue, the inability to sell unwell or dying animals had led to lower-than-normal incomes and a lack of money to purchase food. This further restricted the already limited diet. As one *morán* explained, *'Due to the current situation there's no market for the few animals left for us to sell, so we don't have money to buy food. There are no other casual labor activities that one can do to get some money, so they have to take blood from the animals'*. Tapping blood was described as an *'art'* that required expert knowledge on the location of the jugular vein and the ability to drain a quantity of blood that would not be detrimental to the cow's health. Blood mixed with milk is a traditional Samburu meal, particularly eaten to supplement the diet during dry seasons, but with the effect of the drought on milk production, adolescents reported that they were sometimes having to consume blood alone.

In Meru, as in Ngomongo, however, low family income was a barrier to adolescents eating well, and again the rising price of key commodities such as maize flour was keenly felt. The 2012 Meru North SMART survey highlighted that the lack of diversified income in Meru contributed to an over-reliance on farm produce (MOH, IMC and OCHA, 2012). Growing a wider variety of vegetables was perceived as a threat against guaranteeing their cash crops, and space for cash crops was prioritised at the expense of growing food to eat. In Maua, this was particularly striking as it was estimated that 95% of land was dedicated to the production of *miraa*. As one adolescent boy who participated in a workshop in Maua concluded, *'We are all farmers but we only farm miraa'*. *Miraa* required less water than maize to grow, but as the 2012 Meru North SMART survey noted, poor soil fertility and environmental degradation were evident in *miraa* growing areas (MOH, IMC and OCHA, 2012). Some families were reported to only eat two rather than three meals a day when food was scarce, and adolescents confirmed that they often had



"Due to drought young people eat bananas that are not matured"

Mikinduri, Meru County

to eat 'cheaper' food, 'Usually we take ugali with tea which is cheaper than buying cabbage stew'. Buying tea and sugar was also reported as cheaper than cabbage, suggesting the higher price of more nutritious foods. As discussed above, caregivers in Mikiniduri were clear that, 'We just cook what we can afford we don't focus so much on the food groups', and as one young mother stated 'Meat is a dream'.

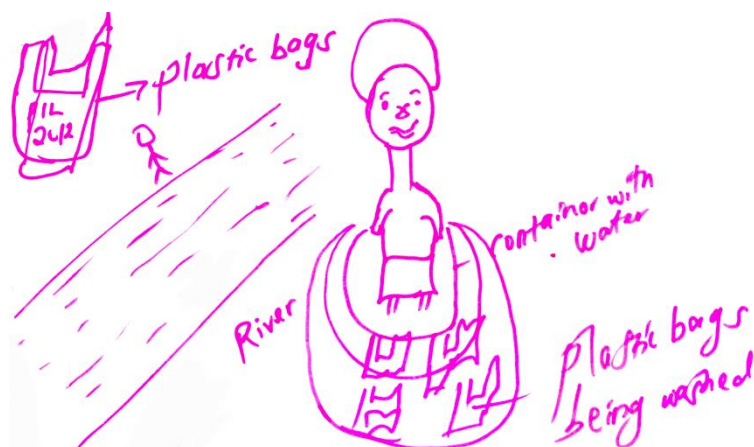
Income generating activities

The rate of child labour in Kenya in 2015 is estimated to be 8% for children aged between five and 17 years (KNBS, 2015). Across the sites included in the research, female and male adolescent participants had become financially responsible and entered the labour market to generate extra income, for their own food and/or the entire household's food.

In Nairobi, particularly in the informal settlement of Ngomongo, piecemeal work and 'hustling' was common practice. The informal labour activities that adolescent girls were engaged in included washing clothes, collecting plastic and scrap metals to wash and sell, and, for older girls from approximately 14 years onwards, prostitution. In the workshops in Ngomongo and Utalii, adolescent girls described their age mates stripping and selling sex at the roadside (a practice they referred to colloquially as a 'road show') to earn money to pay for food. The participants discussed the rates a girl could charge with one girl suggesting, 'Some sell their bodies at 200 shillings [1.95 USD]' whilst another retorted, '200 shillings is a lot, some sell for 50 shillings [0.50 USD]'. Stakeholders highlighted that such risky behaviour was a substantial factor in the high rate of teenage pregnancy, 'You will get young girls engaging in sex at an early age. You can get a young girl who is 15 years or 14 years old and pregnant, but they are not aware'.

In Ngomongo, the dumpsite played a pivotal role in the lives and livelihoods of the adolescents and featured in several of the drawings participants produced during the workshops. One particular example being the collection and cleaning of plastic bags from the dumpsite which get sold in bulk for cash to a 'middle man'. In describing her drawing that depicted this practice (see drawing below), a 16 year old adolescent girl, explained,

The things people do to get food. This woman is washing plastic bags from the dumpsite. To get these plastic bags, you pay 3000 shillings [29 USD] for a year to join the group [this is an informal but strongly enforced system in which only recognised members of the group are permitted to collect bags from the dumpsite]. You don't pick the plastic bags and then pay, no, you just pay the money to cover the whole year. You come and pick them each week from Monday to Friday. On Saturdays and Sundays you come here and wash them. This is the river, these are the plastic bags and this is the bucket. You put the plastic bags in the bucket and then you step on them to remove the dirt, and then you come here and rinse them and let them bask in the sun. This is the dumpsite where you get the paper bags. This picture is close to my heart, because I myself do this job. Instead of me being idle at home, my mother saw that this work is very good for me because it's not costly, so we began it together. You just use your energy.



'This picture is close to me heart because I myself do this job. Drawing, 15-19 year old adolescent workshop, Nairobi.

The adolescents associated particular risks with this work, discussing how the dirty river water which the bags are washed in 'cracks our feet' (which could lead to possible infection and contraction of certain diseases) and the likelihood of physical threats from gangs at the dumpsite (e.g. a person may be attacked if found to have anything valuable, such as a mobile phone). Adolescents suggested that their caregivers encouraged them to find casual labour to supplement family

income. In Utalii, where there was not a dumpsite, adolescents still collected, washed and resold recyclable items. There, adolescents were seen to be at high risk of exploitation by middle men as they were paid very little for collecting the materials.

In both Ngomongo and Utalii, older boys described their age mates *'hustling'* for work at construction sites, and being paid to carry and transport stones. Again, experiences of exploitation were common, with the pay boys received often based on the middle men's visual appraisal of their age and strength. Other informal jobs that adolescent boys were engaged in included carrying water for people, selling 20 litre jerry-cans of water, changing tyres, washing cars, chopping wood, cooking *mandazi* (fried dough balls), searching for scrap metal and garbage collection. None of these activities were seen as formal jobs. The majority of adolescent workshop participants who were out of school self-identified as having 'no occupation', yet the majority were involved in these activities. Adolescent boys in Nairobi also reported their age-mates engage in theft and robbery as a way to generate income.

In Samburu, income generation played a major role in determining school attendance (as discussed further below). Caregivers were forced to spend long hours in search of work, leaving adolescents, particularly girls, to take care of household activities and younger siblings. Adolescents themselves also participated in labour activities, although in Ndoto, employment options were limited for the entire community. Girls described collecting firewood and running errands, such as fetching water or washing clothes. Selling sex was raised as an activity by county-level stakeholders, but was not brought up by adolescent participants themselves. Girls explained that they engaged in money-making activities to purchase food for their household and to buy themselves beads and bangles. For boys, local income-generating activities included cutting cedar trees to make and sell poles (scaffolding) for use in construction sites, whilst others migrated to local towns to seek work as security guards or engaged in petty crimes.

In Meru, the main income-generating activities for adolescents were related to cash crop industries, including tea, coffee, bananas and *miraa* (khaat) production. An estimated 35% of children (under 18s) are engaged in labour activities in Meru, largely within the agriculture sector, and particularly within *miraa* production (Meru County Government, 2013). As one adolescent boy in Maua commented, *'The business of selling miraa makes more money than staying in school'*, although to others, working in the *miraa* industry was a way for adolescents to pay their own school fees. As adolescent participants in a workshop in Maua discussed,

Boy 1 *Miraa farming has a lot of work. From the time of planting, the young people do this. Then there is weeding, pruning, spraying and adding the manure. When the plant is grown you have to keep watering it, and here there is a challenge with finding the water you have to fetch. Then there is harvesting and sorting out it in different sizes to sell. For carrying the miraa you get paid 50 shillings [0.50 USD]. However, our parents do the selling. We only carry from the shamba [farm] to the market, and selling is for parents only.*

Boy 2 *It is a bit confusing because sometimes those who are schooling still do this job of farming.*

Boy 1 *I can explain. For example, someone is chased away from school because of school fees, so you find a job to do to supplement the little money they [parents] give you to meet the whole amount needed for school [including uniform, books, equipment].*

Boy 2 *The parent cannot look for other people to come to work in the farm when you can work and get the money to pay the school fees.*

Local programme implementers described children beginning work in *miraa* production from the age of seven years, from the time they are tall enough to prune *miraa* bushes.

Their involvement with *miraa* creates significant health issue for adolescents. In Maua town, adolescent participants estimated that two to three girls and seven to eight boy in every ten habitually chew *miraa*. They reported that this directly affect food consumption. An adolescent boy in Maua who did not use *miraa* commented of those who did, *'Their appetite is small, they don't even eat. They cannot spit out the*



"Miraa, we eat during leisure time and they reduce stress"

Mikinduri, Meru Conty

miraa they are chewing, they would rather not eat', whilst a girl in Mikinduri explained on behalf of those who did use *miraa*, *'We eat in our leisure time to reduce stress'*.

Other social consequences of the *miraa* trade included conflicts over land, and between different groups or cartels of *miraa* producers. Adolescent in Maua reported that *miraa* was so valued that if a crop was disturbed or a bush uprooted and the perpetrator was caught, he may expect to have his hands cut off or be burnt alive.

Other income generating activities reported by younger adolescent boys in Mikinduri and Maua included feeding cows and doing other odd jobs such as fetching water. As one boy in Mikinduri concluded, *'We are being overworked to carry water to look for food'*. Older boys also reported working on construction sites and collecting scrap metal. Working under-age

(i.e. under the legal age of 18) was reported to lead to various forms of exploitation including being paid less than older labourers and delayed payment. Adolescents were in a vulnerable position because they did not yet have an ID card (due to being under 18 years old) or school certificate (due to non-attendance). As an adolescent boy in Maua explained, *'As an adult you will negotiate, but the adolescents, they are children, so you give them a lot of work for very small money'*.

Younger adolescent girls described their engagement in income-generating activities including fetching water, washing clothes and washing dishes. Older adolescent girls may become a *'house girl'* employed by another family to take care of their children, wash the house, clothes and dishes, and often to buy and prepare their food. Girls described being at risk in this position because they could be taken advantage of sexually by their employers, which could lead to pregnancy. Selling sex was recognised as another income generating activity, often resulting in more money. Whereas small tasks could pay 30 to 50 shillings [0.30 to 0.50 USD], adolescent girls reported that between 200 to 500 shillings [2 to 2.90 USD] could be earned through prostitution. Girls explained that they used the money to buy clothes, shoes and sanitary pads, but most often undertaking income-generating activities was closely linked to buying food, for themselves and their household. As a community leader in Mikinduri concluded, *'The girls join prostitution without knowing [what sex it, what the risks of sex are and how to use contraceptives as protection].'*

An additional income generating activity mentioned in all sites was the brewing of alcohol. Local alcohols produced included *busaa* made from maize flour (and costing about 10 shillings for 350ml); *changaa* made from herbs, sugar, honey (costing 20 shillings for 50ml); and *muratina* made from honey and herbs (by way of price comparison, a cup of flour at market cost 60 shillings). Commercial brands of alcohol, Tusker, Guinness, and Moonwalker, were all available in Ndoto. Given the prevalence of alcohol in their communities, adolescents had a large vocabulary to describe it, but emphasised again, that drinking alcohol was a common strategy to overcome hunger. In the photowalk exercise conducted in Ndoto, one adolescent girl photographed *changaa* being brewed and explained, *'This picture is a woman cooking changaa because they don't have food. It is one way of getting money to buy some food. Changaa makes people to do some things that are very bad'*. Selling alcohol was described as a way to generate income to buy for food, but alcohol was also seen as a food source in itself, as people consumed the residue left over from the brewing process, at least for *busaa*. Caregivers in Samburu asserted that the extent to which alcohol was drunk was a new and damaging phenomenon in their community. Instances of women, even pregnant women, drinking were highlighted as being of particular concern. Adolescent girls expressed feeling vulnerable to drunk men in the community, and saw the negative effects of alcohol consumption stating, *'Drunkards cannot provide for their families'*.



"Changaa brewing"

Ndoto, Samburu County

In Meru brewing alcohol was also common, and local varieties included *senator*, *marwa*, *mokachah* and *steam*. As in Samburu, alcohol was a source of income for women to buy food, but was also blamed for reducing the income generating potential of men, who were the primary consumers of locally brewed drink. This was therefore described to affect the food intake of the entire family and to place *more* responsibility on the adolescent age-group.

Social norms and restrictive food practices

A number of social norms and restrictive food practices emerged as factors affecting adolescents, and their access to adequate nutrition.

In Nairobi, the hustling life-style meant long hours away from home searching for work and the subsequent convenience of having ready-made food close to hand. This lack of time, was also given as a key reason explaining low levels of exclusive breastfeeding in the Link NCA study (Action Against Hunger, 2016). Poor household-level storage facilities also meant that food could not be prepared ahead of consumption, and this contributed to the preference for street food.

A number of household practices were found to create barriers that prevented adolescents from eating well in Nairobi, particularly adolescent girls. In both Ngomongo and Utalii it was agreed that if the male head of the household was at home, he would eat the most. Male adolescents ate more than girls because of the perception that they were stronger, and had greater needs as they had to protect the family and do more physical household chores such as fetching water. Female caregivers and girls usually were described to need to eat less, which led one of the younger adolescents participating in a workshop in Nairobi to conclude, '*Girls don't like eating much*'. In Utalii, however, caregivers explained that girls snack a lot more in-between meals than boys.

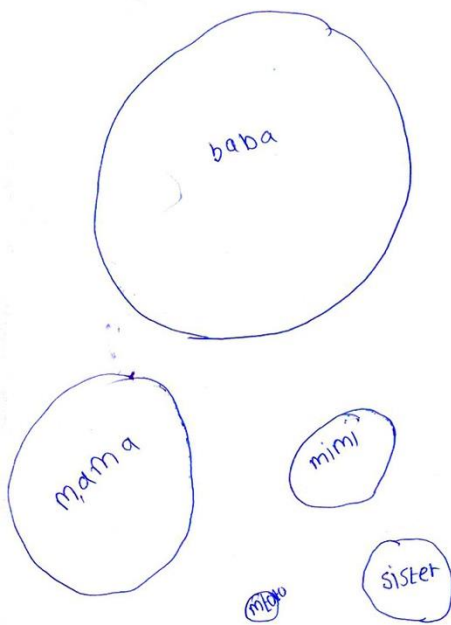
In Samburu, proscriptive eating practices were also highlighted. Traditionally, fish, eggs, donkey, pig and chicken were avoided, although many people now eat chicken and eggs if they have the opportunity. A number of gender-specific eating practices were significant. Pregnant women (including adolescent girls) were restricted as to the quantity and type of food they could eat in order to limit the foetus size and reduce the risk of obstructive labour. For the duration of pregnancy, their diet mainly consisted of milk mixed with water, and their intake was monitored by their husband, mother-in-law and community elders.

Gender-specific eating practices were also evident for boys. As in Nairobi, male members of the household ate first and larger portions of food. Children ate the second largest share of the meal, and finally the women, particularly the mothers, ate least. The adolescent girls engaged in the study agreed this was necessary, '*It is like a belief that boys eat more, we grow up knowing that*'. Following circumcision, a boy was no longer allowed to eat food prepared by his mother. Nor can he eat in front of a woman, but must eat with at least one other circumcised boy. As one boy explained,

We don't usually eat with the rest of the family. Father, mother, children eat at home, but for us we eat outside in the forest, or there's a traditional house built for us on purpose to go and cook our food there. There is no woman allowed to enter that house. It is for us to go and cook our food. It serves as our kitchen.

A local government representative explained the origin of this practice,

Let me take you back to the ancient origin of that. In Samburu there was a drought, this drought was very dangerous it really affected the animals all the animals died... Men being the decision makers they declared all young men who are energetic will not come and scramble to eat from the mother and father at their house. Anybody who is energetic, go and find for your own food, that is now our survival technique. Leave the little that we get to feed those who are not able.



*'My father eats the most'.
Drawing, 10-14 year old adolescent
workshop, Meru.*

Once a *moran* is married, he can choose to eat at home again, and consume food prepared by his wife, once the required ceremony has been performed.

One drawing (see left), made by a 13 year old girl during a workshop in Mikinduri, Meru, depicted the relative portion sizes typically eaten in her household. As in the other fieldsites, the male head of the household has the largest portion and eats first, whilst the women and children receive the smallest amount.

In Meru, as in Samburu, circumcised boys eat separately from their mothers, and as community leader in Mikinduri confirmed, *'The boy can no longer enter the mother's kitchen. He starts shying away from his mother, he cannot tell her directly that he is hungry, he can't show her his weakness'*. It was necessary for boys to prepare their own food, but rather to eat in a separate area. Stakeholders suggested that this was practice was becoming less strict, and as a community health volunteer suggested, *'These days, after circumcision, even women go and talk to them, the traditions are changing'*.

Pregnant women in Meru avoided avoiding eggs due to the concern *'Too much protein can make the baby become big'*. Instead, they are encouraged to eat lots of fluids, such as soup, fruits and yams, although again, not all were reported to follow this practice strictly. Adolescent mothers suggested that they were sometimes seen as a burden on their household, and as such, those living at home, often received only one portion of food to divide between herself and her child. Many reported that they would prioritise their child, and at times forego meals. This, and restrictive diets during pregnancy and the post-partum period, were reported to effect the production of breastmilk, and contribute to young mothers not breastfeeding exclusively for six months.

Food knowledge

Misconceptions around healthy and unhealthy foods, and lack of knowledge concerning food preparation emerged as key factors affecting adolescent nutrition.

Commonly across sites adolescents understood 'healthy food' (*chakula na afya* in Kiswahili) and 'good food' (*chakula bora* in Kiswahili) to be those that a) provide energy; b) 'keep you full'; and c) are un-processed/natural. In Nairobi, rice, for example, was perceived to be unhealthy, because it did not 'keep hunger away for long'. Roadside food was commonly identified as being unhealthy and the rumour that street food is cooked in 'electrical transformer oil' was frequently repeated by participants. In describing the preparation of *anyona* (street food), one adolescent boy explained, *'It pollutes everywhere because it is in pieces. Also because they are not packed in papers, when you buy them it is packed there and then and you don't know if the person packing them has clean hands or not'*.



*'Anyona in Nairobi'
Drawing, 15-19 year old adolescent workshop, Nairobi.*

Despite classifying roadside food as unhealthy, such foods made up a substantial component of the diets of adolescents in Nairobi. They suggested that knowledge about healthy and unhealthy foods came from school, and when during the workshops they were asked to identify healthy and unhealthy foods, their response was often to list foods as if repeating them by rote learning (see Table 7 below).

In emphasising the need for a range of food types, it appeared that adolescents were familiar with the concept of a varied diet, and some used the terms proteins and vitamins suggesting a basic understanding of nutrition. Wanting different foods was also associated with taste preferences and status (e.g. the more varieties of food, the better off you were). Adolescents in Utalii and Ngomongo listed a number of fruits and vegetables amongst their list of 'healthy' foods (see drawing below).

The adolescent group found to have the least knowledge regarding healthy foods were boys. Adolescent boys in Ngomongo, described their age-mates as 'Not having knowledge, they only eat to be strong. They don't really know which foods are good and which aren't good'. Interestingly, caregivers in Nairobi admitted they had limited knowledge about food, but there it was agreed that money (purchasing power) was more important than knowledge about what to buy. As one caregiver explained, 'We said that food is there, vegetables are there, there is fish, there is meat in the butchers, there is milk in the shops, but you should tell us what is the cheapest food we can buy to give a balanced diet to the teenagers, that is the key'.

Similar findings were reflected in the Link NCA study (2016) in the informal settlements of Mukuru and Viwandani which identified a good level of knowledge associated exclusive breastfeeding practices, but found other barriers such as economic pressures and time-poverty ratio prevented the implementation of this knowledge.

In terms of food preparation, adolescent boys were divided about their abilities to cook. One boy reflected the sentiment of the other boys in his workshop when he explained, 'I don't cook, it won't be consumable. I won't lie to you I don't cook and I don't know how to'. A number of other boys, however, suggested, 'I know how to cook a lot of things like ugali, green vegetables, meat, chicken, potatoes, mukimo', although it was not clear how often they actually prepared meals.

County-level stakeholders in Samburu suggested that in general, adolescents had a poor knowledge about what food stuffs were most healthy and nutritious. One local government representative commented, 'They don't know the value of what's in the food they are consuming or the different micro-nutrients or vitamins in the different foods, so that's a challenge'. When asked what they understood by 'healthy foods' (*ndaa supat* or *ndaa sida* meaning 'good food' in Samburu), in comparison to their counterparts in Nairobi, there was less recognition of the importance of a varied diet, which could reflect their lower level of knowledge or also that a limited diet is their norm (see Table 7 below). Regardless, when prompted adolescents were able to list healthy foods including proteins, fruits, vegetables and carbohydrates (see Table 8) suggesting they have some knowledge that a healthy diet is varied. Adolescents suggested that during times of a serious drought and food insecurity is elevated, food was not eaten because of its perceived nutritional content, but simply to satiate hunger. As one local government official in Ndoto

'Good foods and bad foods'

Drawing, 10-14 year old adolescent workshop, Nairobi.

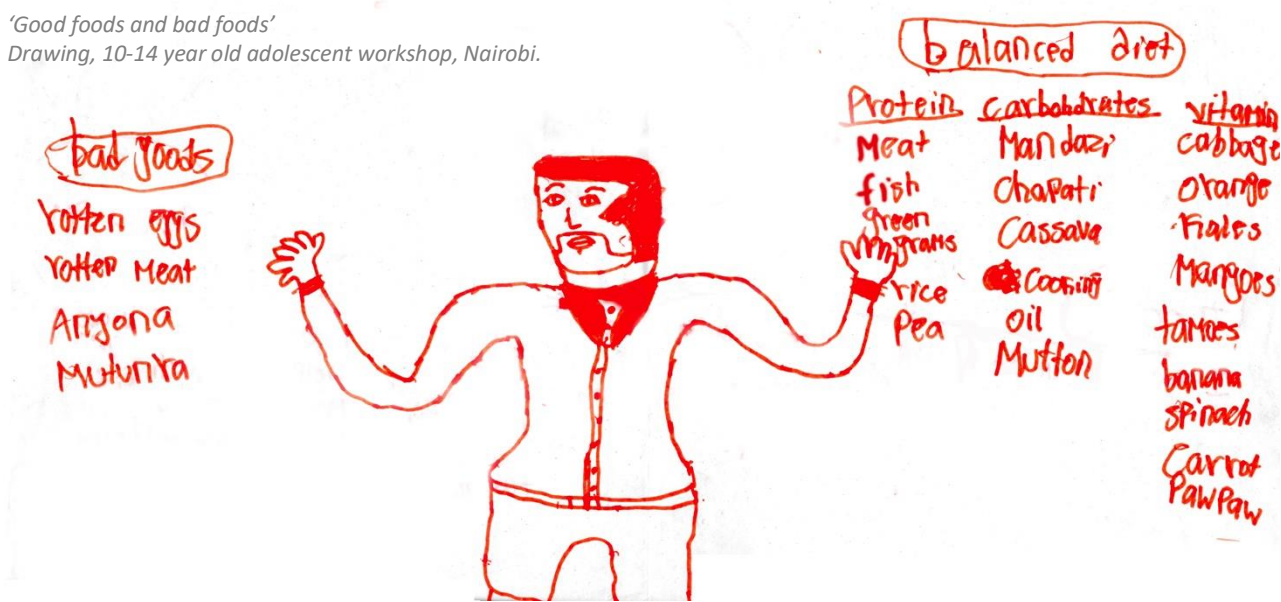


Table 7 – Foods classified as healthy and unhealthy by adolescents²⁹

		Nairobi		Samburu	Meru
		Ngomongo	Utalii	Ndoto	Mikinduri/ Maua
Healthy	<i>Ugali</i>	✓	✓	✓	✓
	Rice			✓	
	Maize			✓	
	Meat			✓	
	<i>Githiri</i>	✓	✓		✓
	Fish	✓			
	Fingerlings		✓		
	Eggs	✓	✓	✓	
	Chicken	✓	✓	✓	
	Milk	✓		✓	
	Blood			✓	
	Cabbage	✓		✓	
	Beans	✓	✓	✓	✓
	Peas				✓
	Carrots			✓	
	Spinach	✓			
	Kale		✓	✓	
	Green grams	✓		✓	
	<i>Sukuma wiki</i>	✓			✓
	Potatoes	✓	✓		
	Arrowroot				✓
	Pumpkin leaves				✓
	Yam				✓
	Avocado		✓		✓
	<i>Chapatti</i>	✓			✓
	Porridge (from maize or wheat flour, soya or fermented)	✓		✓	✓
	Watermelon	✓			
	Mango	✓			
	Pineapple		✓	✓	
	Guava		✓		
	Apples		✓		✓
Melon		✓			
Oranges		✓	✓		
Unhealthy	Rice	✓			✓
	Roadside pizza	✓	✓		
	Sweets	✓	✓	✓	✓
	Biscuits	✓	✓	✓	✓
	Soda				✓
	Cakes	✓	✓		
	<i>Anyona</i>	✓			
	Sausages	✓			
	Chicken feet	✓			
	Roadside beans	✓			
	Black cooking oil	✓			
	Chips	✓	✓		✓
	Spaghetti				✓
	<i>Mandazi</i>	✓			✓
	Pastry				✓
	<i>Samosa</i>		✓		
	Cabbage		✓		
	<i>Bhajija</i>		✓		
	<i>Lochoro</i>			✓	
	Bananas				✓
Alcohol			✓		

²⁹ Rice and cabbage were mentioned as both healthy and unhealthy foods, and in Samburu, plumpynut was listed as a healthy food.

concluded, *'Food is not consumed for the benefit of the body, it's just to fill the stomach'*. Similarly, alcohol was consumed to *'fill the stomach'*, even by younger adolescents, although it was categorised as unhealthy (discussed further below). Adolescents in-school reported getting knowledge from school, although county-level stakeholders criticised the curriculum for, in the past, not making teaching locally specific enough (e.g. teaching about unavailable food stuffs such as coffee). There had also been efforts from the Public Health Officer to bring MOH Nutritionists into schools for seminars. Those not in school reported mostly receiving food knowledge from their mothers. The foods that caregivers in Samburu identified as healthy were not usually available to purchase in their community.

In discussing the aspects of food and nutrition in which they would like to increase their knowledge, adolescent girls in Samburu expressed interest in gaining more knowledge about how to prepare different foods, particularly chicken which they were unfamiliar with cooking themselves (as traditionally chicken is not eaten) although it is available in the community, whilst adolescent boys wanted more knowledge about farming and the production of different food stuffs. It was notable that *morans* had limited experience in cooking until they were forced to do so after becoming independent after circumcision (discussed further below). When asked about their hygiene practices around preparing food, *morans* engaged in the study concluded, *'After we finish eating, we put our pots upside down, and just leave them there until we cook the next time, because we don't know when we are going to get the next meal or blood'*.

As in other research sites, adolescents in Meru understood 'healthy foods' (*Irio biena inya* meaning 'strong food' in Kimeru), to be those that gave energy, satiated hunger for longer periods and were natural. Foods that did not meet these criteria were classified as 'unhealthy'. Table 7 also highlights the food adolescents classified as unhealthy. As in Nairobi, the majority of participants highlighted the benefits of a mixed diet, and a number explained the need for proteins, vitamins and carbohydrates, with special interest in traditional staples such as yams and arrowroots. The young mothers who participated in the workshops also suggested the value of adding pulses and greens to a dish to make it healthy. When describing the ingredients of food items, however, only key ingredients were mentioned. For example, when describing the ingredients of *githiri*, only maize and beans were noted, never the other vegetables such as onions and greens which were added during cooking. A community leader in Mikinduri explained, *'They don't see these things are important to mention, there is no sensitisation that has been done to inform them of the importance of eating a balanced diet'*, although this view contradicted the knowledge base expressed by adolescents themselves.

Adolescent participants felt that maize flour brought from the market was the *'unhealthy option'* compared to maize milled locally, a view echoed by community-level key stakeholders. As one local leader concluded, if you consume local flour *'You may avoid many diseases like aflatoxins because the flour you buy, you don't know how it was prepared'* (which would have implications for fortification interventions).

Adolescent boys suggested that they received information on healthy foods from books and teachers in school, as in the other counties, but also mentioned television or billboard adverts as sources of information. Girls, however, suggested whilst they may get information from teachers, they were more likely to learn about healthy foods from their mothers and friends. There was uncertainty over whether caregivers themselves knew about nutritious foods. The importance of 'traditional' knowledge about healthy foods, passed down orally between generations, was however emphasised on in Meru and had clear significance for adolescents. As one adolescent boy in Mikinduri asserted, *'We know yams and arrowroots and cassava are healthy because our grandparents and parents ate them too and they taught us they are healthy. We believe they were eaten by our forefathers, to have a long life'*

Across the research sites, adolescents expressed some similar ideas about healthy and unhealthy foods, in line with the food stuffs that were available in their area (Table 7). Sweets and biscuits were widely regarded as unhealthy, and in Nairobi and Meru, adolescents perceived rice to be unhealthy as it did not satiate hunger for long. In Samburu, adolescents articulated a more modest list of unhealthy foods, perhaps because their food was more restricted overall. Yet foods eaten commonly such as bananas in

Meru and lochoro in Samburu were seen as unhealthy because participants recognised this leads to a uniform and unvaried diet.

Limited nutrition education in schools was highlighted as a further detriment to adolescents' knowledge-base. Food and nutrition is part of the current school curriculum as a unit within the subject 'Science' taught in classes 1 to 8, however stakeholders raised concerns that not all schools taught the curriculum reliably. In-school adolescents confirmed that they sourced the majority of their nutrition knowledge from schools. Adolescents in Nairobi described teachers as a key source of nutrition-related knowledge, and other participants suggested they learnt about nutrition from their school books, but not all placed great value on it as a subject. As one boy in Mikinduri explained, '*It is taught as one subject which some of us drop. Sometimes it is taught but we assume it is just a topic in passing*'. Other participants, however, highlighted the benefits of being educated on health and nutrition. The MoH in partnership with Nutrition International is delivering a pilot programme in Busia, Nakuru and Kitali in select schools, combining nutrition education for adolescent girls and boys and iron-folate supplementation for girls. Reported challenges included securing buy-in from teachers for activities, but also limitations from structural weaknesses inherent in the school system, including access to water and school meals.

Educational attainment

Access to education has strong links to nutritional status. Official primary school age in Kenya is 6-13 years (Standards 1-8), and secondary school age is 14-17 years (Forms 1-4). Kenya instigated the Universal Primary Education policy in 2003 for primary school to be free of charge, except for costs of uniform, books and other contributions requested from the school management. Secondary education is not free. Secondary schools in the country only number 30% of the total primary schools, and an estimated 26% of primary schools and 12% of secondary schools are private (MoEST, 2015). The estimated enrolment rates for primary and secondary level in Nairobi, Meru and Samburu counties are presented in Table 8.

Table 8 – Primary and secondary net enrolment rates (MoEST, 2015)

	Primary Net enrolment rate	Secondary net enrolment rate
National Average	88	47
Nairobi	78	25
Samburu	60	15
Meru	94	57

Basic Education Statistical Booklet MoEST (2015)

There is a shortage of government schools in the informal settlements of Nairobi, and as such large numbers of informal schools have been established to fill the demand. Adolescent participants in Nairobi and Meru placed a high value in education. Workshop participants (both older and younger adolescents) highlighted school activities in the daily timelines they produced, and studying featured prominently in the narrative descriptions of their day, with some adolescents in Meru describing rising as early as 4.30am to study. In their list of priority issues, adolescent girls in Utalii highlighted the importance of free education. The perceived value of school was not so tangible in Samburu, and it was spoken about as a '*second-choice*' lifestyle. Historically, the more '*promising*' boys were kept at the *manyatta* to herd cattle, and the girls, to carry out household chores and prepare for marriage. One adolescent girl participant explained she was only allowed to go to school because she was left-handed and therefore her parents believed she would not find a man who would marry her.

Across all three counties, being in education was seen a protective factor against a range of vulnerabilities faced by adolescents. In Nairobi, staying in school was viewed by many participants as protecting girls from becoming pregnant, as being out of school and at home unsupervised was seen to lead to early sexual debut. As an adolescent girl in Ngomongo explained,

Some of the girls in this age group tend to go for early marriage or early pregnancies to get money. In early marriages, some guys lie to them saying if you come to me, I'll take you to school, give you a better life. Because the girl comes from a poor background they tend to go for that. Some of them have sex and get pregnant. Girls are promised money to have sex, so go to get money, but also they get pregnant. So the government should bring in free education because some of them don't go to school and that is why they get pregnant.

For adolescent boys in Nairobi, being in school was seen as a way to avoid the pressure of criminality. As an adolescent boy in Ngomongo highlighted, *'When you go to school you're busy so you don't end up doing crimes'*. The value of education was highlighted for similar reasons in both Meru and Samburu, where it was also seen to discourage early marriage and participation in child labour activities. A community leader in Ndoto, Samburu, asserted education is *'more important than a weapon'*, which given the propensity of arms in the area and the important social position *morans* occupy, is notable.

In all three counties there was difficulty in differentiating whether adolescents were 'in-school' or 'out-of-school'. Teachers who were engaged in the research sites explained that those registered as in-school were not necessarily attending regularly, either due to the competing responsibilities they had and/or the ability of parents to raise the required school fees required. This was true for both boys and girls.

The Ministry of Education compiles internal indicators for primary and secondary schools including promotion rate (the percentage of students who advance to the next grade), repetition rate (the percentage of students who repeat the grade) and dropout rate (the percentage of students who leave school during or at completion of the grade). According to the most recent data available (2014), total promotion rates were over 90% for all grades except standards 6, 7 and 8 (the last years of primary school), with girls having a slightly higher promotion rate overall than boys. Higher rates of repetition were associated with these grades, and there was a marked rise in dropout rate for both girls and boys in standards seven and eight. The higher promotion rates (<100%) and negative drop-out rates in forms 1 and 2 for girls were attributed to the Educational Re-Entry Policy for girls after pregnancy. Introduced in 1994, this was designed to encourage adolescent mothers to come back to school, or be supported to find another school if they were likely to face stigma and discrimination at the school they had attended previously.

Reflecting this national trend, teachers in Nairobi, in both Utalii and Ngomongo, reported high drop-out rates before entrance to secondary school. They identified the main causes to include: the inability of caregivers to afford school fees; early pregnancy; and pressure from peers to leave school and join gangs. In relation to dropping out, an adolescent girl in Utalii commented, *'Some of the girls these days are hard-headed, they see themselves as mature'*. The main driver that encouraged attendance was caregiver commitment to education, although as a religious leader in Ngomongo observed, caregivers were more likely to send a boy to school rather than a girl *'When the economy pushes them hard'*.

In Mikinduri, Meru, teachers reported that more boys than girls attended secondary level. Again, the main determinants of attendance included school fees; peer pressure; pregnancy; marriage; and engagement in income-generating activities. It was reported that youngsters often dropped-out of school without their parent's knowledge, and that although primary school enrolment appeared high, many children did not attend regularly. A teacher in Mikinduri confirmed, *'They come to school occasionally. They come some days and miss others. Sometimes they come in the morning and don't come in the afternoon'*. Local leaders described community policing efforts to bring pupils back to school by arresting and sending parents to court if their children did not attend. The Long Rains Season Assessment 2017 (KFSSG, 2017) found a reduction in primary and secondary enrolment by 37% in Igembe North sub-county of Meru, attributing this to lack of school meals and also lack of school fees due to parents directing their money instead to purchase food.

In Samburu, it was reported that the start of primary school education was delayed and school attendance often did not start until the pupil was 11 or 12 years of age. In the sub-county, the distance from home to

the nearest primary school was estimated to be 30-40km by a local education official, and because of this and the associated security risk, caregivers rarely allowed younger children to attend, particularly as this who have necessitated them walking unaccompanied. In deciding when a young person was ready for school, stakeholders confirmed that it had little to do with age, but rather when the '*child could count the number of cows in a herd*'. Consequently, adolescents as old as 18 years attended primary school. As a county-level stakeholder in Maralal concluded, '*You realise that in urban areas, we find most adolescents, in class 8, but adolescents in these rural areas are found even in class 4*'.

In Samburu, there was a notable gender divide in whether a young person attended school or not. In deciding whether a boy would go to school or commence the path to becoming a *moran*, adolescent participants reported that it was a decision taken by their caregivers and the local elders. A major reason for not sending a girl to school, was because of her conflicting household responsibilities, including fetching water and looking after siblings, a finding also observed across the wider Pastoral North-West Livelihood Cluster (Tukana, Marsabit and Samburu) (KFSSG, 2017). In Samburu, the group most likely to not attend school were adolescent girls who had already been '*booked*' for marriage. Caregivers suggested that as marriage signals entry into another family, spending money on educating a '*booked*' girl was a poor investment. Securing a girl's bride price was a strong motivating factor, and as a local leader in Ndoto explained, caregivers were likely to '*consider dowry more than education*', particularly during times of scarcity. Participants highlighted that education can be interpreted as dividing traditional and modern values, for as one adolescent girl highlighted in a workshop in Ndoto, '*Girls who are not beaded are in school. Beaded girls will be married and look after livestock*'.

Two innovating programmes aimed at reducing drop-out rates and non-attendance were highlighted during the research, *Jielimishe* and *Lchekuti*, described in the box below.

Jielimishe

Jielimishe, meaning 'educate yourself' is a project implemented by Girls Education Challenge designed to address barriers preventing girls from re-entering school. Its approach revolves around the girl herself, but links with her caregivers, school, community and the Ministry of Education. Initially the programme supports the payment of the girl's school fees, school uniform and learning materials, whilst working with her caregivers to establish income-generating activities so they have the ability to assume responsibility for financing her education. The school management is supported to improve the school infrastructure, particularly with regards to water, sanitation and hygiene (WASH) and access to learning materials, and community members are engaged in dialogue that promotes education for young people. *Jielimishe* also works with the Ministry of Education to strengthen and monitor school quality. A number of adolescent girls who participated in the research were being supported by *Jielimishe* to re-enter school after they had dropped-out when they became pregnant and spoke positively about their inclusion in the programme.

Lchekuti

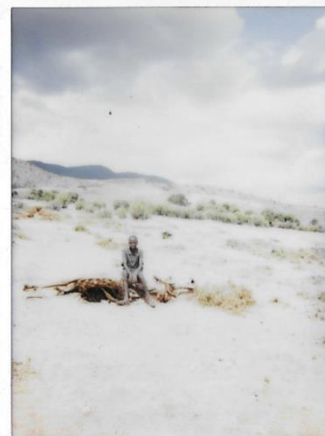
Accessing the formal education system was particularly challenging for pastoralists, and the *Lchekuti* project in Samburu aimed to adapt the curriculum to the realities of young people's lives at the community-level rather than being school-based. Although it was reported that it did not receive national-level support (due to its perceived incompatibility with the formal education system) it was seen to be a positive local solution. As a community leader in Ndoto explained,

These young pastoralist, can go and graze animals during the day then at night from 7pm to 10pm they come and attend school. When we are doing that, the enrolment is very high because it is flexible for them. We have got a name for them, we call them 'Lchekuti' a Samburu name [meaning herder]. It is a flexible curriculum whereby these young people can go to herd animal during the day and during the night they come attend classes

Climate

Climate issues were most keenly felt by adolescents in Samburu. They were conscious that at times of drought, water and grazing sites had to be sought further from the village than normal, and the livestock, their main source of food, was therefore physically distant from them. Those involved in herding, particularly *morans*, ate their meals at the start and end of the day to allow a full day to search for pasture. Adolescents noted that as a direct result of drought the physical health of livestock was threatened, so animals were producing less milk and due to high livestock death, less meat was available to them. In addition to the impact on their health and nutrition status, weak livestock had a significant emotional impact. In documenting key life realities through the photowalk exercise, one girl captured the image of a dead animal. She explained,

That is a carcass of an animal that died of drought and there are many around the village. This is a problem because the drought is affecting us all. Even the small boys standing behind it are feeling the loss... We can't get grass or hay during this period and also there are no medicines to treat livestock diseases.



"Boy with Carcass"

Ndoto, Samburu County

In Samburu, when discussing the use of land as a source of food, the sentiment 'You cannot get things like greens, they cannot grow here' was strongly expressed by many adolescent participants. Notably, county-level stakeholders suggested that agriculture may be rejected by pastoralist communities, but *morans* engaged during the research suggested they were willing to adopt agricultural practice if given the opportunity. As one *moran* explained, 'If we can get money for farming we can do it because we are strong and we are not employed or have anything else to depend on. So we can do it with all our strength'.

As noted above, recent periods of drought had left many families low on livestock and food supplies and with little money. In times of such insecurity, many families decided to marry their daughters at an earlier age to secure their bride price, an important source of financial income, and as bride price was usually paid in the form of cattle, a positive way to overcome a dwindling her. As mentioned earlier, there is a link between early marriage and adolescent pregnancy, with the associated nutritional implications.



"Unhealthy plants due to lack of enough rain leading to lack of food"

Mikinduri, Meru County

Climate was also an issue in Meru. As community members stated, 'If there is rain, we eat from the land, and if not we buy from the market'. Recent bouts of dry weather had resulted in poor harvests and low quality yields, and this was documented as a significant feature of their lives by adolescent girls participating in the photowalk exercise. Lack of rain and otherwise poor irrigation limited the diversity of agricultural outputs for household consumption. In explaining her photograph, the girl simply stated, 'My picture is a picture of dried maize, it shows when the rain failed to come, the maize we had planted did not produce'. Similarly, livestock disease was identified by the Long Rains Season Assessment report as negatively affecting the food security situation of counties including Samburu and Meru (North) (KFSSG, 2017). Neither of the groups identified pests as an issue, which were found (particularly armyworm) in the same assessment to be affecting crops in Samburu and Meru North (KFSSG, 2017).

Security

In Samburu, *morans* act as the key protectors of their villages, and hunger was explicitly linked to cattle raiding. One local government representative explained, 'If you don't have what you eat, you must fight to

get at least some milk, some meat when you are away from home with the animals'. Insecurity from cattle raiding and highway banditry further affected access to food as it limited market and trade routes, and restricted the external support provided to the area.

Issues of security also significantly affected the lives of adolescents in Nairobi, and was particularly linked to theft and the threat of sexual violence. This limited the movement of adolescent girls (as noted above) and was confirmed by key informants to specifically limit their access to certain food markets judged to be in unsafe areas. Related to this, the dumpsite in Ngomongo was a common source of food, but also a place that required protection against gang-violence. One adolescent girl referred to the process of sourcing food from the dumpsite as, *'survival of the fittest'*. The *miraa* trade in Meru was also described as being inextricably linked with violence, but this did not directly impact food access.

Sexual and reproductive health issues

As noted in the previous chapter, sexual and reproductive developments are a defining feature of adolescence as experienced by this age-group. A number of these have implications for nutritional status.

Menstruation

A national-level government representative explained the link between menstruation and nutrition, *'For the prevention of anemia among girls, when they start their menstruation, they need to understand what is happening to them and they need to feed well at that point'*. Across the three counties, however, adolescent girls agreed that the topic of menstruation was not openly discussed with their parents, due to it being a sensitive and often secretive subject. As a result, it could be a poorly understood and worrying experience. A community leader in Ngomongo, Nairobi, confirmed, *'Most adults don't share menstrual information with the kids, and the kids still fear it. So they come and tell you, teacher something is up... They feel like they can't share with their mothers, so it becomes an issue'*. In all field-sites, girls who participated in the research confirmed that if they wanted to confide in an adult, they looked for somebody who was trusted, but outside their nuclear family, for those in-school this was most often a teacher. In Nairobi and Meru, girls highlighted that their reluctance to admit they had started menstruation prevented them from asking their parents for money to purchase sanitary towels. Their need to purchase these 'in private' was described as a factor that drove their income generating activities. Programmatic baseline data from I Choose Life Africa indicated that girls in Meru could miss up to 45 days of school a year due to their lack of access to sanitary towels, and as noted above access to education has implications for nutritional status.

Early sexual debut

Sexual debut before the age of 18 years was reported as common in all three counties, as supported by national data (see Tables 9 and 10 below). In describing their experiences (both in the first person and in terms of their friend's experiences), adolescent boys and girls described having intercourse with people the same age, and younger girls having intercourse with older men. Early sexual debut appeared to be accepted as a social norm, but in some cases was linked to income generating activities including being a 'house-girl', or through prostitution (discussed further above).

Nairobi reported the highest median age for first sexual intercourse amongst females (19.3 years) and males (19.6 years), and Samburu the youngest age of first sexual intercourse for females (15.7 years) and for males (14.9 years). These figures do not match with the relatively adult self-perceptions of adolescent in the Nairobi research sites, suggesting data from the more affluent areas of Nairobi may be balancing data from the less affluent areas regarding age at sexual debut. The younger age of sexual debut in Samburu may link with the lower age of early marriage as detailed below.

Table 9 – Median age at first sexual intercourse (KDHS: KNBS, 2015)

County	Median age at first sexual intercourse	
	Female (20-49 years)	Male (20-54 years)
National Average	18	17.4
Nairobi	19.3	19.6
Samburu	15.7	14.9
Meru	17.1	14.6

Data extracted from (KDHS: KNBS, 2015). Report grouped data for women 20-49 years and males 20-54 years

Table 10 – Percentage of young women and young men age 15-24 who had sexual intercourse before age 15 at regional-level (KDHS: KNBS, 2015)

County	% of population (aged 15-24 years) who had sexual intercourse before age 15 years	
	Female	Male
Nairobi	8.7	18.6
Rift Valley (including Samburu)	13.8	22.9
Eastern (including Meru)	11.1	27.2

Data extracted from (KDHS: KNBS, 2015)

In contrast to county-level indicators, participants in both sites in Nairobi reported that sexual activity for males and females starts from the onset of physical puberty. The national figures for adolescents exposed to sexual and physical violence (aged 13-17 years) are high at 11% and 49% respectively (UNICEF, 2012). Adolescent girls in Nairobi and Meru highlighted sexual vulnerability as a greater concern than the age of sexual debut, and girls in both Utalii and Ngomongo explained that a fear of rape, and also for some, enacted rape, defined their adolescent years. The lack of street lights contributed to their general feeling of being unsafe in their community and particularly their felt vulnerability to sexual violence. O Ider adolescent girls in Meru expressed feeling vulnerable to men enticing them into sexual activity more generally, including terms of exposure to rape. In workshop discussions, girls highlighted that they '*need tactics*' to be able to '*defend*' or '*protect*' themselves from rape. This was not discussed in Samburu, which could be related to the comparatively earlier age of marriage of girls in that county. Although more males than females have sexual interaction before the age of 15 in all three counties, it was perhaps unsurprising that the same vulnerability was not voiced by adolescent boy participants.

Contraception use

Popular modern contraceptives, as measured by national statistics include (in order of popularity for 10-19 year olds) injectables, male condoms, implants and the pill (KNBS, 2015). The majority of women of reproductive age obtain contraceptives from public health facilities, with the exception of the pill, which is mainly sourced through private facilities and pharmacies, and male condoms are most commonly bought from shops. According to the KDHS (KNBS, 2015), Samburu reported the lowest rates of female contraception use of the three counties included in the research, with 18% of married girls aged 15-19 years using modern contraceptives, and with an unmet need of 12%. The highest rate of female contraception use was reported in Meru, with 85% of married girls using modern contraception, and 0% having an unmet need. Although in Meru, the youth leader raised concerns about how adolescent girls were taught about family planning and contraception and as one local leader in Makinduri explained, '*The way they are taught at school is that if they use family planning before they get a child, they will lack a child [not be able to conceive]*'. This message passed by a school-teacher is note-worthy as comprehensive sexual education is not officially within the school curriculum due to its controversy as a topic at national level related to the country's religious beliefs.

According to the KDHS (KNBS, 2015), 78% of married 15-19 year old girls in Nairobi use modern contraceptives, and only 6% who want to avoid pregnancy have an unmet need for contraceptives (KNBS, 2015). In contrast to the data suggesting good contraception uptake in Nairobi, the experiences of adolescent girls and boys engaged in the research in both Ngomongo and Utalii implied poor attitude towards contraception and resulting uptake. In both communities, participants repeated the popular saying, *'Some people say you can't eat a sweet with its wrapper, you need to remove the wrapper'*. Although this quote suggests a simple preference for sex without contraception, adolescents in Utalii suggested that abstinence was the only serious solution to birth control in Utalii. Sexual violence was seen to impact self-protection, with one adolescent girl commenting, *'when someone rapes you, will you tell them then you have abstained?'*

Early marriage

The legal age for marriage in Kenya is 18 years. National stakeholders expressed concern regarding early marriage because of its strong correlation with early childbearing. According to the most recent KDHS, the median age at first marriage for women is 20.2 years, and 25.3 years for men (see Table 11).

Table 11 – Median age at first marriage (KDHS: KNBS, 2015)

County	Median age at first marriage	
	Female (20-49 years)	Male (30-54 years)
National Average	20.2	25.3
Nairobi	22.1	26.1
Samburu	18.4	26.2
Meru	20.3	25.4

Data extracted from (KDHS: KNBS, 2015). Report grouped data for women 20-49 years and males 30-54 years

KDHS data suggest that girls marry at a younger age in Samburu than in the other research counties. County- and community-level participants suggested that many girls marry before the median age reported in the data (18.4 years), and county-level stakeholders confirmed that a large number of early marriages are not known by Department of Children's Services (the department of the Ministry of Gender, Labour and Social Protection charged with child protection), and are carried out *'in secret'*.

Being married at a young age was a reality highlighted by almost all adolescent girls in the study. Recent periods of drought had left many families low on livestock and food supplies and with little money. In times of such insecurity, many families decided to marry their daughters at an earlier age to secure their bride price, an important source of financial income, and as bride price was usually paid in the form of cattle, a positive way to overcome a dwindling herd. Girls in Meru described their concerns about early marriage in terms of having to drop out of school (discussed further above), yet in Samburu, where early marriage for girls was the norm from the age 12, adolescents did not perceive early marriage in the same way. Although unmarried girls who were still in school were more circumspect, the majority of girls either married or soon-to-be married voiced being proud of their status and position. Boys in Samburu discussed marriage around the theme of food, noting that it is the wife's responsibility to feed the husband, and as such marriage signals a move from feeding yourself to being catered for by your wife. This important social norm is discussed further above.

Pregnancy and childbearing

As noted in the introduction, a particularly hard to reach group and one that is at significant risk for malnutrition are pregnant adolescents and adolescent mothers.

Both adult and adolescent participants across all three counties raised and openly discussed issues related to adolescent pregnancy. The KDHS (KNBS, 2015) reported that 26% of 15-19 year olds in Samburu County had started childbearing compared to a national average of 18% (KNBS, 2015) (see Table 12). Adolescent pregnancy can be linked to both early marriage and early sexual debut (under 18 years), particularly in Samburu where adolescent pregnancy rates negatively correlate with age of marriage and age of sexual debut (18.4 years and 15.7 years respectively (KDHS: KNBS, 2015)). Caregivers in Samburu were resigned to the fact that adolescent pregnancies were ‘out of their control’. As one caregiver concluded, *‘Nowadays, a girl becomes pregnant when she is still small because she goes around with boys, they do whatever together and after some time you see the stomach bulging out’*.

Table 12 – Percentage of female 15-19 year olds who have started childbearing (KDHS: KNBS, 2015)

County	% of 15-19 year old females who have started childbearing
National Average	18
Nairobi	17.4
Samburu	26
Meru	20

Data extracted from (KDHS: KNBS, 2015)

Key informants in Meru, agreed that adolescent girls started getting pregnant from 15 years of age, and that the social consequences of pregnancy included being chased away from home, dropping out of school, and the break-up of family units.

Local stakeholders suggested that the official data were unlikely to record the number of ‘*secret pregnancies*’ and illegal abortions that were reported by adolescent girl participants in both Nairobi and Meru. Older girls in Ngomongo discussed unsafe abortion practices as being common, with one group describing their particular experiences,

Researcher	<i>Is there someone who does this job here?</i>
Girl 1	<i>Yes</i>
Researcher	<i>Does he do it in his house?</i>
Girl 1	<i>Some even use biro, and even wires</i>
Girl 2	<i>He does it secretly</i>
Girl 3	<i>He doesn't have a specific place</i>
Researcher	<i>So he can come to your house and perform it?</i>
Girl 1	<i>Yes</i>
Girl 3	<i>Abortion sometimes kills girls</i>
Girl 2	<i>Yes, it does</i>
Girl 4	<i>Because of excess bleeding</i>
Girl 5	<i>Or the procedure was performed badly</i>

In the Meru research sites, adolescents perceived illegal abortion as particularly dangerous, leading to death or infertility. Those responsible for conducting abortions, including private unregistered clinics and herbalists, are at risk of being arrested by the ward administration and so were often hidden in the community. Abortions are illegal in Kenya, yet in response to the high death rates linked to illegal abortions, the government introduced Post-Abortion Care training for health-workers in 1999, with ‘*amnesty*’ for girls seeking this service in government health facilities. Further exploration of this fell outside the remit of the research.

HIV

Regional data for Nairobi reports 2% of youth aged 15-24 years with HIV (NASCOP, 2014) and national- and county-level stakeholders identified that youth of this age group living in the informal settlements are the most concerning population regarding raising HIV rates. Regional data for Samburu and Meru reported

0.5% of youth aged 15-24 years have HIV, one of the lowest rates in the country (NASCO, 2014). Perceptions and experiences of HIV were not discussed in detail across sites, and the quantitative data did not explain the root causes of these regional differences. National-level stakeholders suggested that adolescent HIV was a priority issue because of the increased nutritional requirements of a person living with HIV and the link between anti-retroviral treatment adherence and food intake, however the potential impact this had on daily lives of adolescents in the study was not clear. In Meru, adolescent girls emphasised that they did not attend antenatal care (ANC) because they feared the mandatory HIV test that was part of the service, suggesting, *'You prefer not to know your status'*. This suggests the inclusion of HIV testing within an integrated service created a barrier for the entire service.

Service Delivery Issues

Traditional avenues to target adolescents with nutrition service are through the school and health systems. The study revealed a lack of health service uptake by this age-group and the poor quality of 'youth friendly services' where they are available. Similarly, school feeding programmes were shown to be rife with challenges. Such service delivery issues are further factors affecting adolescent nutrition.

Health facility attendance

Health facilities are an important avenue for nutrition services, particularly during pregnancy. Attendance data for use of health facilities by the adolescent age group are not regularly scrutinised at facility level but data on the uptake of ANC, delivery and post-natal health services by women of reproductive age (WRA, 15-49 years) as reported in the KDHS (KNBS, 2015) is helpful (see Table 13).

Table 13 – ANC and delivery service uptake amongst women of reproductive age by location (KDHS: KNBS, 2015)

County	ANC attendance		Delivery attendance
	% of women with 4+ visits	% receiving ANC from a skilled provider	% delivered by a skilled provider
Nairobi	73	98	89
Samburu	52	74	29
Meru	56	97	83

Data extracted from KDHS (KNBS 2015).

The majority of adolescent mothers who participated in the data collection in Nairobi, Samburu and Meru reported having attended antenatal care, but usually *'at the last minute'*, and many in their age group forego ANC and only attend delivery services (discussed further below). This has implications because of the nutrition services offered at the point of ANC. Similarly, in Samburu, health workers reported that adolescents presented at the health facility at *'Strange hours of the day'*, were likely to arrive when they were already in labour, or to avoid the health facility altogether.

Youth friendly health services as included in the Reproductive Health Care Bill (2014) are supposed to encompass four broad characteristics: (i) providers should be trained and supported to be non-judgmental and friendly to adolescent clients; (ii) health facilities should be welcoming and appealing; (iii) communication and outreach activities should inform young people about services and encourage them to make use of services available; and (iv) community members should be made aware of the importance of providing health services to adolescents (Reproductive Health Care Bill, 2014, Ministry of Health, 2014). Although they are outlined in policy, few youth friendly services exist in practice, and the county hospital in Meru was the only site included in the study that was supposed to include youth friendly services. Despite this, adolescent participants in Meru did not regularly interact with health facilities. They regarded health facilities as a *'Place for sick people'* and not for preventative care. Services were therefore for other people

rather than themselves, and facilities were not perceived to be places seek information on health matters (including nutrition). As an adolescent boy in Mikinduri concluded, *'The doctor treats sick people in the community. Not normally our age'*. None of the participants in Meru were aware of the Youth Friendly Centre at the hospital, and it was notable that ANC was not provided as part of the youth friendly service. Health providers felt it was an important concept, but needed to have 'buy-in' from all levels, from the management of the facility to the community, to be successful.

At a national level, due to a reported lack of feasibility to provide separate spaces for youth friendly services, there is a movement to train health facility staff and community extension workers in taking a youth friendly approach and integrate adolescent health across services. National-level stakeholders reported that programme implementers such as Pathfinder International and UN agencies including UNFPA and UNICEF had agreed to support the MOH give these 'orientations' to staff. Adolescent participants had a number of ideas on how to make services more engaging and as such 'adolescent friendly' (presented in the following chapter).

In all three sites, negative community attitudes towards early pregnancy made pregnant adolescents feel shame and fear and girls confirmed that they were likely to *'hide themselves away'*. There was a lack of privacy at health centres and girls did not want to raise their profiles or see people they know by attending. As one county-level health worker in Maralal concluded, *'When they come to our facilities, they find their mothers and their fathers waiting in the bay, so they are not able to wait and so we are losing a lot of them'*. Adolescent mothers in Meru also highlighted that they were financially dependent on their parents, and did not want to ask for money to attend ANC services, particularly given other household priorities. Similarly, in Nairobi, girls confirmed that they could expect the financial support of their parents or for their caregivers to accompany them to health centres because of *'time poverty'* and lack of income. The lack of ANC is concerning, and suggests that pregnant adolescents miss crucial nutrition-related information and services that should be embedded within ANC. National- and county-level stakeholders also reported a high number of caesarean sections were performed on this age group in response to obstetric risks (given their smaller body size) that may be compounded by restrictive eating practices during pregnancy (discussed above).

Logistical barriers and general reticence to engage with health facilities was compounded by the services provided. Adolescents also reported a sense of frustration by the lack of drugs available at health facilities when they did attend. In Nairobi, workshop participants described that facilities sold *'donated drugs'* to the local pharmacy. As one adolescent girl explained, *'You can actually find the medicines written 'GOK' [Government of Kenya] and 'Not For Sale', but they still sell them'* and another concluded, *'When you go to hospital you are supposed to be given folic acid for free, but as of now you have to buy it'*. ANC services are supposed to be free of charge in Kenya, although fees are often charged for registration and some laboratory tests.

RECOMMENDATION:

- 1) ABSTAINANCE.- To be able not to get the early pregnancy.
- 2) SECURITY.- To be able to protect themselves from rape cases.
- 3) SELF-DEFENCE.- All about rape cases.
- 4) APPROVED SCHOOLS.- Because of school drop-outs.
- 5) FREE EDUCATION.- To be able to get free schools and not to pay.
- 6) SANITARY TOWELS.
- 7) THE GOVERNMENT SHOULD IMPROVE THE LIVING CONDITION OF GHETO PEOPLE.
- 8) THERE SHOULD BE ENOUGH STREET LIGHTS.

*'Recommendations and priority issues'
Drawing, 15-19 year old adolescent
workshop, Nairobi.*

Many adolescents recounted negative experiences at the point of care including difficult interactions with health staff, and as one community leader in Nairobi confirmed '*Health centres are not receptive*' to younger people. These findings were supported by other qualitative research conducted with health workers in Kenya that demonstrated a low level of health worker competency in providing youth friendly approaches, and identified cultural and religious values regarding contraception for young people as key barriers to equitable service delivery (Godia et al, 2013).

Community Health Volunteers were not popular with adolescents engaged in the study, who felt some could have their '*favourite*' community members to engage with. They preferred younger '*mentor-like*' figures, which they did not classify CHVs as.

Despite these challenges, however, positive experiences were highlighted. Adolescent mothers in Utalii emphasised that the positive attitude of health staff in their local facility in Mathare North encouraged their attendance. In Samburu, the majority of workshop participants – girls with and without children – also spoke favourably about their local health facility praising health workers for '*washing the womb*' after delivery, which is also a practice in traditional Samburu medicine.

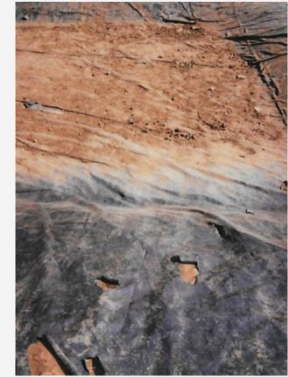
School feeding

The country has adopted the Home Grown School Meals Programme that provides support (either in-kind or cash) to schools in vulnerable areas of the country, namely the ASAL region, therefore school feeding is not nationalised. The Government of Kenya recently developed a National School Meals and Nutrition Strategy encouraging all counties to provide safe, nutritious daily meals to all primary grade students.

In both Nairobi fieldsites, local primary schools provided lunch-time meals, provided by NGOs and WFP. School meals were perceived by local influential persons to be a good motivator for keeping children in school, although caregivers in Ngomongo described the food as lacking in variety, '*Githiri December to December, January to January. There's no balanced diet*'. Caregivers did not always know how much food was given to their children at school, and this affected how much food they were provided with in the household. If children were thought to have eaten a large lunch at school, for example, they were likely to be given less in the evening at home. In Utalii, parents reported paying higher school fees so their children could eat twice a day at school with more variety in their meals (rice, beans, green grams and occasionally meat). For the past year, WFP has provided support to diversify primary school meals in Nairobi with an additional incentive to procure fresh fruits and vegetables, however this is only the 91 schools directly supported by WFP.

In Samburu North, schools were perceived as a major source of food for children. The impact of providing school meals was directly related to school attendance. There, participants explained that children were more likely to attend school when they saw smoke ('*moshi*') coming from the school kitchen. As part of their Home Grown School Feeding programme, school meals in Samburu were supported by WFP until 2016 when the Government of Kenya assumed responsibility. There have been challenges regarding the supply of food to schools, and one primary school visited during the research was yet to receive the food that had been allotted to them for the term, although the end of the school term was close and no food had been provided to the children. The Long Rains Season Assessment Report for 2017 found a lack of school meals associated with decreased attendance between Term I and II across Turkana, Marsabit and Samburu counties (KFSSG, 2017). This observation was reflected in reports from other participants across the county. At school, standard portions are served to the pupils regardless of age, meaning that a four-year old girl is allotted the same as an 18 year old boy. Teachers explained that they sometimes re-portion food, allotting more to the older pupils.

In Meru North, the Home Grown School Meals Programme is supposed to be active, with the 2017 Long Rains Assessment Report (KFSSG, 2017) reporting that *'some schools in the agro-pastoral zone of Meru have benefited from general food distribution rations from the Ministry of Interior, while other schools mobilise children to bring meals from home, covering an additional 12,325 students.'* The school visited in Mikinduri, Meru North during the study reported that school feeding is supported minimally by the government and has no supporting partner organisations, and the provision of school meals therefore relies on both caregivers and schools making contributions. Although some schools had developed good collaborative relationships with the pupils' caregivers, this was not true of all schools. Some children reported having to go home for lunch or skipping the lunchtime meal altogether. Stakeholders emphasised that the provision of regular school meals would be a powerful incentive for children to attend school, and suggested that schools should cultivate a kitchen garden to supplement basic meal options with more vegetables.



"Due to drought the ponds have dried up and aquatic animals have died"

Mikinduri, Meru County

In Mikinduri, Meru, an NGO project had constructed fishponds in school grounds to provide a source of protein to contribute to the pupils' diets. As one girl reported, however, the pond had dried-up as it could not be sustained through the dry season without using precious piped water or well water to supplement it (see photograph above). In the workshop, she also drew a picture of the dried-up school fishpond, explaining, *'My picture is of the dried fishpond. The fishpond dried, so all the fish we had died. The fish were a source of protein for us, this is what we were getting in this area'.*



Table 14 – Factors affecting adolescent nutrition as raised by adolescents in workshops by location

	Nairobi		Samburu		Meru	
	10-14 years	15-19 years	10-14 years	15-19 years	10-14 years	15-19 years
	Household economic status	Household poverty and lack of formal employment, affording <i>'unhealthy but cheap'</i> food	Household poverty and lack of formal employment, affording <i>'unhealthy but cheap'</i> food	Reduced revenue from livestock and other IGAs, limits amount and quality of food-stuff purchased	Reduced revenue from livestock and other IGAs, limits amount and quality of food-stuff purchased	Low family income, prioritisation of cash crops over family food
Income generating activities	Washing clothes, collecting plastic and scrap metals to wash and sell (females), fetching water and selling water (males)	Same as younger group and, stripping and prostitution (females) additionally cooking snack food, washing cars, changing tyres and construction work (males)	Collecting firewood, fetching water, washing clothes (females), fetching water (males)	Collecting firewood, fetching water, washing clothes, brewing alcohol (females) cutting trees to make and sell construction poles, security guards in town (males)	Agricultural labour (males and females) fetching water, washing clothes, washing dishes (females), feeding cows, fetching water (males)	Agricultural labour (males and females), babysitting, washing clothes, prostitution, brewing alcohol (females), construction, selling scrap metal (males)
Social norms and restrictive food practices	Convenient and ready-made food to fit in with hustling lifestyle, gender norms with males eating more	Convenient and ready-made food to fit in with hustling lifestyle, gender norms with males eating more	Gender norms with males eating more, restricted food intake during pregnancy	Gender norms with males eating more, restricted food intake during pregnancy (females), taboos against eating in front of women (males)	Gender norms with males eating more, restricted food intake during pregnancy (females)	Gender norms with males eating more, restricted food intake during pregnancy (females), taboos against eating in front of women (males)
Food knowledge	Healthy food is filling; processed and oily food is unhealthy. Diet should be varied. Used food group terms	Healthy food is filling; low quality, processed and oily food is unhealthy. Diet should be varied. Used food group terms	Diet should be varied. No use of food group terms	Diet should be varied. Only those in-school used food group terms	Healthy food gives energy, is filling and prevents sickness. No use of food group terms	Healthy food gives energy and is filling, processed food is unhealthy. Diet should be varied. Used food group terms
Educational attainment	Irregular attendance and drop-out after primary level due to the inability to afford school fees	Drop-out after primary level due to pregnancy, inability to afford school fees, pressure from peers to leave school and join gangs, the need to generate income	Delay to start primary school (up to 11/12 years). Low attendance due to household responsibilities, marriage (females), herding (males)	Irregular attendance and drop-out due to household responsibilities, marriage (females), herding (males)	Irregular attendance and drop-out after primary level due to the inability to afford school fees	Drop-out after primary level due to pregnancy, the inability to afford school fees, pressure from peers to leave, the need to generate household income
Climate	---	---	Low on livestock and agricultural produce	Low on livestock and agricultural produce	Poor harvest, low quality yields	Poor harvest, low quality yields
Security	Threat of sexual violence limiting access to certain food markets (females)	Threat of sexual violence limiting access to certain food markets (females)	Cattle raiding (males), limiting market and trade routes	Cattle raiding (males), limiting market and trade routes	---	---
Sexual reproductive health issues	Sexual violence, marriage early pregnancy, illegal abortions (females), early sexual debut, unprotected sex (male and females)	Sexual violence, marriage, pregnancy, illegal abortions, (females), early sexual debut, unprotected sex, rising HIV (males and females)	Circumcision (males and females), early marriage for bride price, pregnancy (females)	Circumcision (male and females), early marriage for bride price, pregnancy (females)	Access to sanitary towels (females)	Circumcision (males), access to sanitary towels, sexual violence, marriage, pregnancy, illegal abortions, fear of HIV (females)
Service delivery issues	Unlikely to use preventative services at health facility, including ANC. Lack of diversity in school meals	Unlikely to use preventative treatment services at health facility, including ANC	Supply for school meals not available in previous term	Supply for school meals not available in previous term	Unlikely to use preventative services at health facility, including ANC. School meals not supported by parent	Unlikely to use preventative services at health facility, including ANC. Unaware of 'Youth Friendly Service'

4. Engaging adolescents

The UN Convention on the Rights of the Child emphasises that children and adolescents have the right to participate in decisions affecting their health and wellbeing. One of the guiding principles of the Convention is that child and adolescent views should be voiced, respected, and utilised effectively to enrich decision-making processes.

Engaging adolescents is key to the full realisation of this fundamental right, yet adolescent voices are not often (if at all) incorporated in the evidence-base used to shape policy and programming. Engaging adolescents requires a commitment to user-focused design so that interventions respond to their needs and priorities, are contextually relevant, and utilise a range of the most appropriate engagement and communication channels for reaching adolescents girls and boys over time.

By emphasising a systems-based approach to adolescent programming, where adolescents are seen as an integral part of the social fabric of their communities, this chapter presents data on key adolescent influencers, appropriate media channels for reaching adolescents, and local structures that can be utilised for direct engagement with adolescents, their families, and their communities.

Analysis is underpinned by the social ecological model (SEM), that places the individual (i.e. the adolescent) at the core, surrounded by nested levels of interpersonal, community, organisational and policy-level influence that represent the multifaceted and interactive effects of personal and environmental factors determining behaviours (UNICEF 2014, CDC 2015). Interrogating the power dynamics between adolescents and their environment can lead not only to greater engagement for nutrition-specific and nutrition-sensitive programming, but also support effective cross-sectoral programming (e.g. linking health, education, sexual reproductive health etc.).

The first section of this chapter explores the key influencers of adolescents. The second section triangulates results from the technology survey and the workshops to report the various technology platforms adolescents engage with. The third section details findings from the landscape analysis of national delivery channels reaching adolescents, and presents the channels adolescents preferred and prioritised and their key recommendations on how to best operationalise these.

Influencers of adolescents

As Aibel (2012) concludes, *'Most policies, research and programmes on child nutrition in non-Western societies focus narrowly on the mother-child dyad and fail to consider the wider household and community environments in which other actors, hierarchical patterns of authority and informal communication networks operate and influence such practices'*. This also holds true for adolescent programming. It is critical that the various actors who influence adolescents, are better understood. During the participatory workshops, adolescents were asked to create social network maps that helped to identify the people they spend time with and where, how they get advice and information, and who they trust. In their consideration of who and what influences them, and in what ways, adolescents and other stakeholders were articulate about the level of agency and self-determination adolescents had in different contexts. In terms of key influencers, the following groups emerged: caregivers (parents / parents-in-law); husbands; peers; organised groups (e.g. youth associations); religious institutions; schools; and other influencers (including community leaders and politicians).

Caregivers, parents and parents-in-law

In Nairobi, participants of all age-groups in both Ngomongo and Utalii positioned the mother, or main female carer, as their closest influencer. She was also identified as the main source of advice and information across all the groups, although it was agreed that there were a number of issues that adolescents would not discuss with their parents (e.g. menstruation and pregnancy). Overall it was agreed parents needed support to be more hands-on with their children.

In the diagrams drawn by male adolescents, the father figure was also included in the closest circle of influencers. In all but one diagram drawn by the female adolescents, the father did not feature at all, and in the one diagram where he was depicted, it was in the outer most circle of influence. This matches with reports of many single parent households in Ngomongo and Utalii. Although (if present) he maintained a great deal of respect and influence indirectly as a decision-maker and household financial controller.

In Utalii, mothers described themselves as being *'hands on'* and actively involved in shaping a young person and their life, and providing guidance in terms of other influencers. As one mother in Utalii confirmed, *'As a parent, we look at who our children's friends are'*. In Ngomongo, although caregivers were also positioned as key influencers, parenting was more *'hands off'*, particularly in terms of sexuality and early pregnancy. Community leaders suggested that *'90% of parents are not good role models to their kids'*, and explained that a girl was able to hide a pregnancy because caregivers *'do not inspect those girls much'*. In discussing parental attitudes towards teenage pregnancy, local leaders agreed that the general attitude was *'Now that you messed up, that is your business'*.

In Meru, younger adolescent boys and girls reported that they spent most time with their mothers or main female caregiver, and described her as a key source for advice and information. Older adolescent girls also described their mother as a key source of information, although she was positioned slightly further away in their diagrams, indicating they spend less time with her. Older adolescent boys confirmed that they received advice from both their mother and father, despite spending less time with them. Mother figures were seen to determine action in the household, in terms of allocating chores and ensuring they were done correctly, whilst father figures provided direction in regards to animals and money. Together, both parents made decisions about key life events including who goes to school and when, and the timing of marriage, particularly for girls.

In Meru, negative effects of parental influence were linked to the consumption of alcohol, and a number of ward-level stakeholders suggested that adolescents could be *'neglected'* by their parents. A similar issue was reported in Ndoto, Samburu, as married girls reported that parental *'drunkenness'* shifted greater household responsibility onto adolescent girls, spent money otherwise meant for household food, and caused daughters to be *'booked'* for marriage at an early age to secure bride price. Across the field-sites detrimental parental influence could have a significant effect on adolescents who still regarded their primary caregivers as their main influencers and source of information regardless of the quality or orientation of that influence.

In Samburu, caregivers were also reported as key influencers. For girls, the mother or main female caregiver played a central role, because as one county-level stakeholder from Maralal explained, *'In Samburu culture it is a taboo for a man to talk to his daughter, they leave all responsibilities to the mother'*. Adolescent girls and pre-circumcised boys spent most time with their mothers, and both learnt to cook by watching her prepare food. Post-circumcised boys reported a shift in time spent away from their mothers, although she was still present in their social network maps. In Samburu, when a girl was married, the sphere of influence shifted to her mother-in-law as a central figure, but fathers-in-law were not mentioned. In Meru and Nairobi, in-law figures were not documented in the adolescents' social network maps. This may have been due to fewer married adolescents being engaged in those sites in comparison to Samburu, but also emphasised that at marriage, there is a much stronger transition for a girl into her husband's family in Samburu than in the other counties.

Husbands, boyfriends and girlfriends

In Samburu, when a girl married, her husband was described as becoming the '*new decision-maker*' in her life, and girls corroborated this explaining that their husbands were central in their social networks and became key sources of advice and information. As young husbands were not purposefully engaged in the study it was not possible to explore whether they saw their wives as key influencers, although post-circumcised boys explained that when they marry they will begin eating with and spending more time with their wives. One adolescent boy who was engaged to be married placed his fiancé at the centre of his social network.

Of the adolescent girls engaged in Meru, whilst several had children, none of them were married, so it was not possible to comment on the potentially influential role of husbands. The married adolescent girls in Nairobi put either their mother or husband as their primary key influencer, but not both. If the mother was retained as their key influencer after marriage, the husband was depicted in the outer circle of influence, and vice versa. Older adolescents in Nairobi, both males and females were unique in including boyfriend and girlfriend figures in their social network maps.

Peers

Across research sites, friends were positioned in the closest circles of all the groups' social maps and were recognised as being an important source of information, and in relation to health concerns, participants emphasised that their peers, particularly those who had similar shared experiences (e.g. early marriage or adolescent pregnancy) were preferred sources of advice and support.

Participants in Nairobi explained that young people of the same age '*Tend to understand one another*', particularly if they are the same gender. It was less common for adolescents to include mixed-gender (non-romantic) friendships in their social networks. As one caregiver from Ngomongo concluded, '*Girls like getting information from their fellow girls they hang out with every day. This is because they are free with each other. They can talk freely and are not afraid*'. Participants in Nairobi also highlighted risk factors associated with their peers and observed that some friendship groups could have a negative influence on an adolescent. This was discussed in detail by the older boys in Ngomongo in relation to taking drugs, drinking alcohol and stealing. As one boy affirmed, '*Yes, you can join the wrong groups and they influence you to do what is not right in society*'. Friends were also seen to be influential in terms of whether to attend school or not, and as older girls agreed in their workshop, '*There is something that pushes you or forces you to [stop school] and go to work, so that you can get the good things that your friends are getting*'.

In Samburu, bonds were described as being extremely strong across adolescent peers of the same age, particularly for boys who were part of defined age-sets that pass through different life stages together. Knowledge is passed from one generation to next, therefore younger adolescents are influenced by *morans* and other circumcised boys, who in turn are influenced by the junior elders. The practice of boys eating and sleeping together after circumcision (as described in the daily lives chapter) strengthens this bond. Married girls also confirmed that they spent significant time with other girls of the same age who were also married, rather than unmarried girls.

In Meru, peer groups exerted more influence on older adolescents. Even though older boys still received advice from parents, they spent more time with their friends. Older girls labelled friends as their primary advisors and sources of information, although it was notable that a dominant barrier preventing pregnant adolescent girls from visiting the health centre for ANC was the fear of seeing school-friends there. For the younger adolescent girls, friends of a similar age featured prominently in their social networks, but younger boys reported to be more influenced by boys older than themselves.

Schools

Adolescents actively engaged in the education system identified schools as key places they receive information, from both friends and teachers, particularly about food and issues related to puberty, such as menstruation (as discussed above). Adolescents in Nairobi described teachers as a key source of nutrition-related knowledge, and other participants suggested they learnt about nutrition from their school books, but not all placed great value on it as a subject. In Meru, adolescent boys suggested that they received information on healthy foods from books and teachers in school. Girls, however, suggested whilst they may get information from teachers, they were more likely to learn about healthy foods from their mothers and friends.

The range of information teachers are expected to pass on was highlighted both positively, in that school can be a resource for all avenues of knowledge, but also negatively, with programme implementers noting teachers could be *'over-burdened'* and that it was a challenge to get their *'buy-in'* for delivering further information.

An important finding was that the majority of primary school-age children were registered as *'in school'*, however in reality, did not regularly attend due to other conflicting issues including family/farming/income-generation responsibilities. More vulnerable adolescents were less likely to be in school, and those who did not attend or attended only intermittently did not include school or teachers as key points of influence. Considering the evidence that with greater food insecurity, parents may direct money towards purchasing food rather than school fees, it is likely that adolescents more vulnerable to malnutrition are not regular school attenders. Reliance on school teachers and schools was found to be higher in Nairobi and Meru due to the large percentage of adolescents not attending school in Samburu. This was largely due to conflicting values, with education seen as less important and mutually exclusive from herding (for boys) and household chores and/or marriage (for girls).

Religious institutions

Religious institutions had the greatest influence on adolescents in Meru than in the other counties. There, many participants noted prayer within their daily routines. Christianity was the predominant faith, although there is a range of churches, including Catholic, Methodist and Seventh Day Adventists, all with different structures and approaches to engaging adolescents. A number of churches had their own youth groups, although these did not always include younger adolescents. Due to the influence of the church in Meru, stakeholders emphasised the need to work with religious leaders when designing programmes that particularly engaged youth as certain topics such as sexual health could be a point of contention. In Nairobi, many adolescents, both boys and girls, identified *'friends from church'* or *'church leaders'* in their social network maps, although in the outer circles of influence. A leader in Utalii reported connecting adolescents to the church with activities such as trips and days out. In Samburu, the role of the church was less evident because of the pervasiveness of traditional beliefs.

Organised groups

Civil society actors and grass-roots initiatives engage adolescents through platforms that target specific peer groups. For adolescents involved in such clubs and youth activities, their influence was clear. The groups provided them with new social assets, and their social network maps included individuals labelled as *'coach'*, *'librarian'*, and (as with friends from church) distinguished *'friends from club'* from friends in general. In Nairobi, for older adolescents those that had links with vocational skills and/or income generation opportunities were seen as particularly attractive. In the research sites visited in Nairobi, organised clubs and youth groups were more plentiful than in Meru and Samburu, although they still did not have comprehensive coverage (discussed further below). Adolescents in-school in Mikinduri, Meru reported enjoying the clubs offered at their school, although these did not feature in their social networks.

Young mothers were very positive about the *Jielimishe* programme into which they were recruited by local leadership structures working with ICLA programme implementers (as described earlier). Adolescent girls in Samburu had relatively fewer platforms to receive and share information than girls in the other two counties, but still described their interactions with youth clubs, mother-to-mother support groups, peace clubs and sports clubs. For older boys in Samburu, the tight bonds inherent to their age-set appeared to remove the need for such externally organised groups. Groups were most effective when they allowed the topics of interest to change as interests change, e.g. MYSA has football teams, but also libraries and is adapting new workstreams for fashion etc. Youth Groups under the Ministry of the Interior captured the 18-35 year olds, and there were no similar national group programmes for this age-range identified.

Adolescents who were part of an organised group, either in school or out of school, suggested that it was their preferred channel of information because it was 'fun', a good way to socialise, and provided a safe and trusted space. Three of the groups organised by NGOs or CBOs discussed by participants in the workshops are outlined in the box below.

Other influencers

In Nairobi, adolescents suggested that community leaders did not interact with their age group or mobilise them. Although some of the older boys confirmed that they attended community meetings or *barazas* (a community meeting where decisions are made or plan of action determined) if they were of direct relevance. In Nairobi and Meru it was noted that more vulnerable adolescents, such as those who did not attend school or pregnant girls may fear punitive action by community authorities and therefore avoided contact with them. In Samburu, girls and women of any age rarely attended community meetings and if they did, did not have a voice. In Meru, local leaders suggested that they were confident in conveying information to older adolescents, but to engage with younger adolescents felt it more appropriate to link with their parents. Still, because of their influence in the community more broadly, community leaders were recognised as influencing the lives of adolescents, at least indirectly. County-level stakeholders in Meru emphasised that for any interventions to succeed at the community level, local leaders had to be consulted and made to '*champion*' the action.

Mathare Youth Sports Associations (MYSA)

MYSA is a community development organisation working in Utalii, Nairobi, using sports to create socio-economic change for boys and girls. Their motto is '*Giving youth a sporting chance on and off the field*'. Activities are not limited to football but include cleaning-up their, providing education on sexual and reproductive health, using drama skills, and giving access to the popular MYSA libraries which are well stocked with books and magazines and from where the adolescents can hire bikes. MYSA activities are linked to a system of points that can be accumulated by taking part in football matches and other activities. The number of points held by a team determines its position in the league. MYSA members often maintain contact with the organisation as coaches or librarians, or to create a cache of role models and mentors.

Rescued and Improved Community Education Programme (RICEP)

RICEP is a community-based organisation working with females aged between 16-24 years in the informal settlement of Korogocho, Nairobi. Their members include young mothers and girls who are out of school. It aims to equip them with skills and create '*agents of change*' by providing vocational training in hairdressing, beauty therapy and tailoring. Transferable skills include stress management, effective communication, leadership and governance, business management and entrepreneurial skills.

Kangaroo Community Care Kenya (KCCCK)

Kangaroo Community Care Kenya is a community-based organisation that establishes Working Children Groups (WCG) across Meru County and focuses particularly on young people involved in the *miraa* industry. Each WCG comprises 15 boys and 15 girls. The groups receive education on child labour issues, child rights, financial literacy and life skills. They are given psychosocial support, and can be part of the mentorship and apprenticeship programmes. KCCCK also subsidises their members' school fees.

For many adolescents in Kenya, the 2017 elections were remarkably engaging. As one county-level stakeholder in Meru concluded, *'There were big loud cars moving around with music, with pictures of candidates...it was an exciting period'*. In Meru, several adolescents described certain political figures as role models. In Nairobi, adolescents in both sites suggested that they did not *'trust'* politicians, yet were willing to accept money during the rallies when it was common practice for some campaigners to hand out small amounts of cash to young people. As a religious leader in Ngomongo confirmed, *'Politicians give hand-outs and that is how they pull most of the young people to them. At the end of the day they're each given 50 shillings [0.48 USD] and this happens again the next day'*. This phenomenon was reported to leave adolescents and youth vulnerable to involvement in election violence.

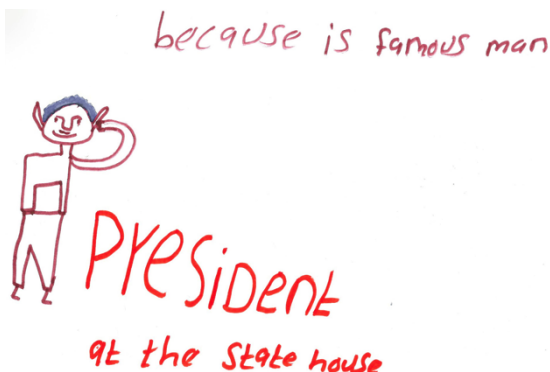
Although the formal health system did not emerge as a strong influencer on adolescents, due to a number of barriers (discussed more in the previous chapter), other sources of care did emerge. In Nairobi, adolescents reported they used private clinics, which are sometimes integrated with pharmacies, to receive health services. Such clinics were not regulated and the staffs' qualifications not guaranteed. It was also common practice to buy medicines directly from a pharmacy and self-medicate. In both Utali and Ngomongo, adolescents confirmed that herbalists (who make medicines from trees and plants) were an important source of care at the community level, and local practitioners who use massage. As one girl participating in a workshop in Ngomongo explained, *'They can tell you how the baby is positioned and they can send you to hospital or sort it out by themselves. They can even tell you the sex of the baby, if it is a boy or girl or twin. So you can plan in advance. You don't have to go to hospital for scans'*. They also gave nutrition information to girls regarding sources of iron. In Ndoto, Samburu, alternative sources of health information and services included herbalists, traditional birth attendants and *'old wise women'*. Whereas western medicine was seen to *'suppress'* an illness and only provide a short-term solution, the herbal medicine was perceived to be longer-lasting, and have additional positive effects related to sexuality and energy. In contrast, older adolescents in Meru confirmed their distrust of traditional medicine, and the use of herbalists and private clinics was mostly linked to illegal abortion. In the Meru research sites, herbalists and private clinics were mostly linked to illegal abortion. In comparison to Samburu, traditional medicine was reported to be not well trusted by the older adolescents.

Role models

A number of stakeholders expressed concern that adolescents have few people to look-up to, and as a result often lack *'direction'*. They suggested that adolescents would be attracted to people with money and status rather than people who were *'accomplished'*. To explore this further, adolescents were asked to identify who their role models were as part of participatory workshops.

In Ngomongo, younger adolescents (both boys and girls) described their role models to be parents, teachers and community elders. Boys of all age groups named footballers as their role models, and girls across both sites vocalized their desire to *'be like'* their mothers. In Utalli, footballers were also mentioned

by adolescent girls involved in MYSAs sports club, and adolescents of both age groups named actors, poets and musicians they aspired to. One boy in Utalli suggested his role model was President Donald Trump and explained that in ten years, *'I will be eating with the President of the U.S. and at that time I will be a mechanical engineer'*.



In addition to individual role models, participants also chose professions they admired. In Meru, for example, adolescent boys (both older and younger) named politicians as role models (see Image 10), but also confirmed they looked up to lawyers, whilst girls chose suggested air hostesses, nurses, doctors and caterers.

'The President'
Drawing, 10-14 year old adolescent workshop, Meru.

In discussing role models in Samburu, participants made an interesting distinction between local role models (e.g. individuals from their immediate environment), and ‘external’ role models. Younger adolescent boys confirmed that they admired and looked-up to men with large numbers of livestock, but also listed professions such as pilots and named specific individuals as role models, particularly international football players. Whereas education, employment and travel were greater aspirations for older adolescent boys in-school, *morans* were grounded in the safety and security of their community, and looked more to their elders. Older unmarried adolescent girls described their admiration for their mothers and other family members who support their mothers with their duties, but also referenced other professions like nurses and politicians.

Media and communication landscape

National level data reported by the KDHS is limited to radio and television and is not disaggregated by age at the county level, but may be indicative. Of the three counties included in the research, it is unsurprising that Nairobi reported the greatest number of 15-49 year olds watching television and listening to the radio (KNBS, 2015). Radio listening was more common than television watching in Meru than Samburu. Overall, men reported greater use of both television and radio than women, with large gender disparities noted in both Samburu and Meru.

In 2016, Well Told Story, a communications organisation based in Nairobi, conducted a national survey, sampling 15-24 year olds in urban and rural Kenya. The findings indicated that 56% of respondents used a mobile phone with SMS being the most common mobile phone activity; 42% used the internet, mostly through their phones and usually between 6pm-10pm; and 27% had a social media account, with Facebook, WhatsApp and Twitter being mostly commonly used to speak with friends, to read newsfeeds and to post personal messages. The study concluded that 15-19 year olds were less likely than 20-24 year olds to go online (Well Told Story, 2016).

The stakeholder mapping and situational analysis conducted as part of the research also revealed a number of technology-related delivery channels reaching adolescents, reported in Table 15 below.

Table 15 – Technology delivery channels for adolescent programming

Delivery channel	Key information
Mobile phones – Short Message Service (SMS)	SMS has been used effectively, by various sectors, to share key information and messages with youth (including adolescents).
Interactive social media platforms	Facebook, Twitter, Instagram, WhatsApp and snapchat have been used to provide an interactive platform for adolescents to participate and engage with each other, peer educators and mentors on issues relevant to them.
Hotlines, help lines and information lines	Government and various organisations have invested in hotlines with the aim of providing quick and interactive information/help/support to adolescents and youth who may want confidential conversations on sensitive topics. One example is LVCT Health free hotline that provides ‘telecounselling’ services largely related to SRH and HIV information. There is also a government instituted free hotline for those exposed to GSBV.

Table extracted from the Kenya Situational Analysis Report on Adolescent Nutrition Policy and Programming

Private media and communications sector stakeholders engaged in the research explained that their target group were ‘youth’ aged between 15-24 years. In acknowledging the unique usage patterns of young people, and the interest in further developing appropriate mobile phone technology, Safaricom confirmed that they were developing a tariff specifically aimed at 10-24 year olds called ‘Blaze’. However, they noted it is illegal in Kenya for people aged under 18 to register a sim card under their own name, rather it must be registered under their parent’s name. It was reported that the tariff will allow for more affordable

credit bundles and personalised packages, in addition to participation in national youth mentorship summits.

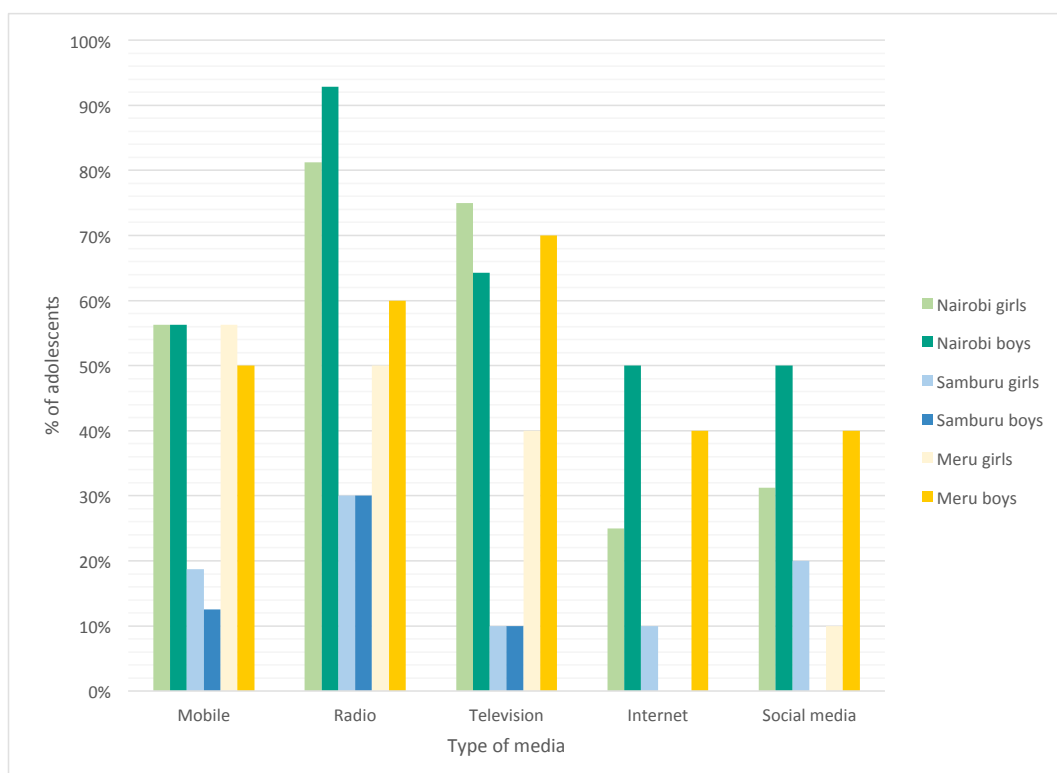
No national data reporting the technology use of 10-14 year olds was identified, and this gap was also noted by stakeholders.

In addition to the participatory workshops, which presented rich qualitative data about the technology adolescents used and the channels they trusted to receive information, the technology survey provided quantitative data about the penetration of technology. Seventy technology interviews were conducted with adolescents aged 10-19 years across the three counties: 30 in Nairobi (16 girls, 14 boys in Ngomongo and Utalii); 20 in Meru (10 girls, 10 boys in Mikinduri); and 20 in Samburu (10 girls, 10 boys in Ndoto). Table 16 provides an overview of survey respondent demographics. Graph 3 (below) summarises their self-reported use of radio, television, internet and social media.

Table 16 – Overview of technology interview respondent characteristics

	Nairobi County (n=30)		Samburu County (n=20)		Meru County (n=20)	
Gender	Male	47%	Male	50%	Male	50%
	Female	53%	Female	50%	Female	50%
Age	Range	11-19 years	Range	11-19 years	Range	10-17 years
	Average	16 years	Average	14.8 years	Average	13.55 years
Years in Education	Range	6- 14 years	Range	0–12 years	Range	5-12 years
Marital status	Married	10%	Married	10%	Married	0%
	Unmarried	80%	Unmarried	90%	Unmarried	100%
	Did not disclose	10%				
No. of children	Have children	20%	Have children	5%	Have children	0%
	Average no.	1.3	Average no.	1	Average no.	NA
Religion	Christian	97%	Christian	95%	Christian	100%
	Did not disclose	3%	Did not disclose	5%	Did not disclose	0%

Graph 3 – Media use by gender and location (n=70)



Mobile phones

According to workshop participants in all three counties, the most popular means of receiving information was via mobile phone. In Nairobi, the majority of participants had access to either a personal or shared mobile phone which they used to both send and receive calls and SMS, but not all had access to a smart phone with internet capability. The technology survey supported this finding with over half of the respondents confirming they had access to a phone, and 100% knowing someone with a phone and being able to borrow it. There were no obvious gender differences in mobile phone access in Nairobi.

In Samburu, many of the adolescents brought their mobile phone to the workshop sessions and the *morans* highlighted the importance of having a phone to access updates on security issues. They explained that mobile phones have replaced the 'on-foot' messenger they used to rely on. Only 20% of respondents in the technology survey had access to a phone, however. A larger percentage (55%) knew others with a phone, but only 20% were allowed to borrow one. Calls were more commonly reported than SMS, as many of the respondents had low levels of literacy.

In Meru, 85% of adolescents in the technology survey had access to a mobile phone they could use. Local programme implementers capitalise on this platform. I Choose Life Africa send SMS messages in the week following a school club meeting to encourage implementation of knowledge learned. Regularity of use ranged from once a week to everyday for girls, but every day for boys. Adolescent girls reported that they used the phone mostly to make calls, particularly to parents and friends. Boys were more likely to send SMS and to connect to the internet on their phones.

Across the three counties, the majority of adolescents who had access to a mobile phone subscribed to Safaricom.

Radio

Radio use was more commonly reported by adolescents in Nairobi than the other two counties, with 81% of female and 93% of male respondents confirming they listened to the radio. Adolescents in Utalii and Ngomongo reported tuning into a wide range of radio stations including Citizen FM, Jambo FM, Kiss FM and Koch FM. Most reported listening to the radio at home, at various times of the day.

In Meru, many but not all adolescent workshop participants reported having access to radio. In the technology survey, 60% of adolescent respondents listened to the radio. Radios were deemed a particularly important medium for those not in school to get information. Adolescents listened to a diverse range of radio stations including Meru FM, Mwariama FM, KBC, and Muuga FM. The preferred programmes involved music or sports and were primarily selected for being entertaining, but also for being interesting and in an understandable language (notably Kiswahili or simple English). Both girls and boys listened to the radio in equal numbers and reported listening to the radio at home. Girls were more likely to listen with their parents, whereas boys were more likely to listen on their own. Adolescents reported listening to the radio during the day and evening.

Radio appeared to be particularly popular in Samburu. In Ndoto, the most popular station was Serian FM, according to ward and county-level stakeholders. Serian FM is a community radio station and community based organisation, '*With the objective to empower and change the attitude of community through communication*'. It runs a number of health campaigns, including a nutrition programme supported by BBC Media Action. This is aimed at women of reproductive age, but with no current adaptation for adolescent audiences. Although Serian FM have other weekend programmes targeting 'youth', questions were raised around whether adolescent girls have sufficient access given their less frequent participation in call-ins. It was recommended that adolescent girls should be more directly targeted through strategies including community outreach to better capture their voices, and through parallel advocacy to parents and husbands of married adolescents to encourage their listenership. Only 30% of technology survey

respondents in Samburu had access to a radio, but these respondents lived closer to the trading centre. The *morans* who participated in the workshop in Ndotto reported that radio did not reach the remote areas where they took their animals to pasture and other respondents reported having never seen a radio in their villages. All listeners self-reported tuning in at home, with parents or friends. As compared to Meru, users reported listening to the radio to hear important information, rather than primarily for entertainment.

Television

In Nairobi, 75% of female and 64% of male technology survey respondents reported watching television, slightly fewer than the number who reported listening to the radio. Popular television channels included Citizen, NTV and KTN. Adolescents reported watching programmes for both entertainment and education. Music was the most popular type of entertainment, particularly reggae music. Adolescents preferred education from real-life stories rather than stories from news programmes. Older girls in particular mentioned watching soap operas. There was suggestion television is more appealing than radio, even if less widely available.

In Samburu, television use was not a common channel of communication, and in the technology survey, only 10% of respondents watched television, usually at home with parents. Again, these were respondents living close to the trading centre, rather than more remotely. Others reported never having a television.

Television was a particularly popular medium reported amongst older adolescents in Meru who confirmed that they trusted it because *'There is evidence you can see'*. The technology survey reported 55% of respondents watched television, with slightly more boys than girls watching regularly. The most popular channels included KNTV, Citizen FM and Mwarioroma, with preferred programmes including cartoons, movies and music. Again, the reasons for choosing programmes was their level of entertainment, followed by being informative and in an understandable language (notably Kiswahili or simple English). Television was usually watched during the evening or night-time.

In their discussions about television watching practices, participants suggested boys have more freedom than girls to watch television. The technology survey supported this finding, with girls mostly watching with family, whilst boys watched with family, alone or with friends. The KDHS reported similar findings (KNBS, 2015) and reflects the notion that adolescent boys having wider social worlds and more independence than girls of the same age.

Internet and social media

Internet and social media were discussed as inextricably linked, but not necessarily as synonymous. The internet was used mainly for social media, but also for other purposes. More adolescents reported using social media than using the internet, mainly because certain social media platforms could be accessed without incurring internet data costs (e.g. through the Free Basics app that allows free access to a number of basic internet services, including Facebook and Facebook Messenger).

Surprisingly, less than half of respondents in the technology survey in Nairobi had access to internet and social media (37% and 40% respectively), and the workshops indicated that these channels were used more by 15-19 year olds than the younger age group. Workshop participants confirmed that not all had smartphones.

The technology survey reported that the adolescents mainly connect to the internet via mobile phones, predominantly to use social media and, less commonly, to conduct Google searches. Workshop participants suggested that the majority of their age-mates who use the internet on their smartphones do

so almost solely to access social media. Social media was reported to be used mostly in the evening and at night, and especially in Utalii. As one adolescent girl concluded, *'I sleep in Facebook'*.

Both quantitative and qualitative data from Nairobi indicated that the dominant social media platforms were Facebook, Whatsapp and Instagram, all of which were used to connect and communicate with friends, and, less commonly, to make new friends. Workshop participants largely agreed their online activities were not supervised, and in discussing her caregiver's oversight, one adolescent girl in Ngomongo asked, *'Why should she take my phone? Is it hers? Does she even know what Facebook is?'* One issue that emerged from the workshops was the link between pride and shame in terms of an individual's worldview and social status, in relation to posing photographs on social media. As one adolescent boy in Utalii explained, *'In the estates you will get people who are into Instagram, but in the ghetto you cannot get someone taking a photo and posting it. Instagram is a 'clean' place'*.

In Meru, adolescents in the workshops suggested the internet was not commonly used, and this was reinforced by the technology survey in which only 20% of respondents, all boys, confirmed they used the internet. Access was via mobile phones and the main purpose was for chatting on social media (Facebook and WhatsApp), and to a lesser extent, to search for information on Google. In the workshops, participants confirmed that all internet usage was unsupervised, *but admitted that they found it difficult to know what to trust on social media. As one girl commented, 'Sometimes they [WhatsApp and Facebook] just have the wrong information', to which another girl agreed, 'The problem with nowadays is that you don't know what is true or not, so we just use it [the internet] for fun'*.

Despite workshop participants in Samburu having mobile phones, both the internet and social media were unfamiliar to them. The technology survey in Samburu only recorded one respondent using social media, (Facebook and WhatsApp).

Adolescent programming and delivery platforms

The situational analysis mapped programmes delivering activities for adolescents under the following sectors: adolescent sexual and reproductive health; HIV treatment, prevention and management; livelihoods; agriculture; education; social protection; participation, governance and leadership, and nutrition. There was found to be a particular bias towards adolescent girls and SRH and HIV programming. The geographic presence of these programmes was not at scale and did not cover the whole country.

The mapping exercise revealed various delivery channels that had been effectively used by programme implementers to reach adolescents. With the recent entry of the nutrition sector into the adolescent programming space, there is a valuable opportunity to leverage the good practice and lessons learnt from other programmes, and in parallel, to integrate evidence-based nutrition interventions into successful programme models.

Table 17 below provides a summary of the mapped delivery channels.

Table 17 – Delivery channels for adolescent programming as reported in the national situational analysis

Delivery Channel	Key Information
A. Community based channels	
Community health strategy approaches	<ul style="list-style-type: none"> The MOH Community Health Strategy provides a framework for the development and implementation of comprehensive community health services. The strategy currently works through 4,100 Community Health Extension Workers (CHEWs), over 200,000 Community Health Volunteers (CHVs) and Community Health Committees. The service providers hold regular community dialogue days and community action days with community members to sensitise them or discuss various health issues relevant to the community. Service delivery to the community is by age-specific cohorts. The adolescents fall in cohort 3 (60 months to 24 years).
'Safe spaces' model	<ul style="list-style-type: none"> The 'Safe Spaces' model, designed by Population Council, is an evidence-based approach used in several countries. The model uses a mentor approach where a group of adolescents meet in spaces identified in the community as safe and appropriate including community halls, schools, churches, mosques, community leaders' residences. The adolescent groups meet regularly under the guidance of an older mentor from the community. The groups follow a structured curriculum (covering topics of relevance to the adolescents) and allow time for open discussion. The groups meet over the course of two years to not only ensure content is delivered, but more importantly, to help the adolescents build social assets such as friendships and adult mentor relationships.
Community-based youth groups	<ul style="list-style-type: none"> Formed within communities these groups bring together young people of varying ages for a common cause. Most of the existing community youth groups engage those aged 15-30 years, hence younger adolescents may be left out of these groups. Organisations working with out-of-school youth mostly work through and with such youth groups. The groups are formed by communities through their own initiative or by organisations with specific needs. The Ministry of Public Service, Gender and Youth Affairs has the mandate of forming community youth groups and have a database of all youth groups existing in each county.
Peer educators / providers	<ul style="list-style-type: none"> This was the channel most commonly used by organisations to deliver messages and services to adolescents, both in school and out-of-school settings. Peer education is an approach from health promotion, in which community members are supported to promote health-enhancing change among their peers. Peer education is the teaching or sharing of health information, values and behaviour in educating others who may share similar social backgrounds or life experiences. Peer educators interact with their peers (adolescents) using different platforms (schools, community, health facility, social media, mass media) on numerous issues relevant to them. The value of peer education is based on the premise that the educators understand the real issues facing adolescents since they are their peers and so undergo the same issues.
Youth champions	<ul style="list-style-type: none"> Youth champions are powerful leaders (youth and non-youth) who are admired by young people because of their talents or role in the community. The champions are leaders in their individual fields of influence, for example, politicians, artists, musicians, radio and TV personalities, etc. They are employed by various sectors to engage young people on key issues. Their opinion matters to young people hence they inspire large-scale change through leadership development, technology, innovation, and advocacy.
B. Learning institutions	
School teachers, college/university lecturers	<ul style="list-style-type: none"> Most of the mapped organisations used learning institutions (primary and secondary schools, colleges and universities) as a platform for reaching adolescents. Teachers and lecturers, supported by peer educators/mentors are the main change agents working with students to discuss topical issues or promote adoption of positive behaviours.
School clubs	<ul style="list-style-type: none"> These clubs are instituted in schools. School clubs are mostly student-based school organisations. They are approved by the school administration and cover numerous tasks although may have a specific focus. Clubs are composed of and are peer led, although in most cases, there is a mentor who is either a teacher or lead guide or older alumni girls. School clubs usually meet after formal school hours for approximately one hour sessions.

Delivery Channel	Key Information
	<p>Students are encouraged to join school clubs based on their interest areas.</p> <ul style="list-style-type: none"> • They are convenient and safe spaces for students to interact, bond and discuss important issues in a fun and relaxed manner. Clubs are found across all levels of education (primary, secondary, college and university) and are regarded as a strong platform for engaging in-school adolescents.
C. Sports and recreation activities	
Sports (e.g. football) and recreational activities including dance, music, poetry, popular culture, drama, magnet theaters ³⁰	<ul style="list-style-type: none"> • Adolescents are encouraged to participate regularly in sport, play, creative or other activities that they enjoy to help them develop new abilities and skills, self-esteem, confidence and a sense of purpose and identity. • Being involved in positive activities can help adolescents get through difficult times in their lives. It also lets them make links in their community, interact with peers and make new friends. • As well as the physical health benefits, sporting and other physical activities such as riding bikes, swimming or walking, provide opportunities for safe risk-taking, learning and developing teamwork, coordination and discipline skills. Arts and drama are a way for young people to express themselves creatively, including their feelings, in a safe environment. Hobbies such as music, dancing, reading, cooking and gardening let young people explore their interests and help them develop a sense of self-worth and enhance their quality of life.
D. Mass media channels	
Audio, visual and print media	<ul style="list-style-type: none"> • The mass media channels include use of radio, television and newspapers, magazines to share information with the adolescents. Though mass media channels are expensive to use, their main advantage is the wide coverage of audience.
E. Health facilities	
Clinic based model for youth friendly services	<ul style="list-style-type: none"> • The MOH has an essential service package that is to be provided to youth through the clinic-based model for youth friendly services (YFS). Various organisations partner with the government to improve YFS through public and private health facilities to reach adolescents seeking these services. It is important to note that YFS approach is not wide spread, particularly in public health facilities. According to the 2013 Kenya Service Availability and Readiness Assessment Mapping (SARAM) report, only 10% of public health facilities provide comprehensive YFS.
F. Faith communities' places of worship	
Churches, mosques and temples	<ul style="list-style-type: none"> • The majority of the Kenyan population worship regularly and young people are actively involved in religious activities. The use of churches, mosques and temples as an avenue for disseminating information and outreach was regularly documented.
G. IEC materials	
Posters, wrist bands, T-shirts, calendars, leaflets, DVDs, etc.	<ul style="list-style-type: none"> • Key messages on various topics are promoted on posters, wrist bands, T-shirts, calendars, pamphlets, school books and wall branding in learning institutions.

Table adapted from the Kenya Situational Analysis Report on Adolescent Nutrition Policy and Programming

In addition to the IEC materials and mass media approaches described above, one example of an innovative approach to mass media that was highlighted was the Shujaaz initiative, described below.

Shujaaz – Well Told Story

Shujaaz is a well-established, tried and tested, interactive multi-media platform launched in 2009. The Comic Book, designed by Well Told Story is delivered countrywide through The Saturday Nation Newspaper and through 3000 DJ B superfans. DJ B is a character within the comic book who also hosts one hour radio shows on Flamingo Station (National Online station), Baliti FM (In Isiolo) and Milele FM (nationwide).

³⁰ Magnet Theatre is a form of community theatre that typically takes place in outdoor, public spaces. The hour-long performances explore issues affecting a community and encourage discussion and problem solving with audience members. The actors perform a drama that presents a dilemma based on community issues. The audience participates by offering suggestions to the characters or by taking the place of an actor and acting out solutions to the dilemma.

The topics in the comic book and on radio vary and include areas such as agriculture, innovations, entrepreneurship opportunities, lifestyle and family planning strategies, financial literacy and capability skills, and health and self-agency insights.

Engagement preferences

Adolescent participants in workshops and adolescent respondents to the technology surveys suggested their preferred channels for engagement. They highlighted:

- **Informal spaces:** Meeting spaces, accessible within their own communities and that could facilitate 'everyday communication' through 'word of mouth' with peers and other key influencers was a key platform preferred by adolescents across sites and groups. Some of these were formally organised (e.g., in the MYSA library in Utalii) and others were informal meeting places (e.g., whilst collecting water, 'moran' meeting spaces, traditional dances etc).
- **Clubs and groups:** Engaging adolescents through organised clubs and groups (either those already established or through developing new clubs) was strongly recommended. Adolescents involved in sports club in Nairobi were highly engaged and motivated, assimilating its influence into their social networks and role models. In Meru, adolescents who were difficult to reach (e.g. those working in the *shambas* and/or heavily involved in cash crop industries), confirmed that local-level engagement was critical, and mentioned the KCK's community action leaders who were deployed in every sub-location as a good model. Groups that facilitated peer-to-peer support (focusing, for example, on young mothers), privacy and respect were seen to reinforce positive behaviour. Organised groups that allowed topics to change with the developing interests of adolescents were seen to be particularly effective. In Nairobi, for older adolescents those that had links with vocational skills and/or income generation opportunities were seen as particularly attractive. The main challenge for smaller civil society organisations was the lack of regular funding to maintain their presence at community level.
- **Religious institutions:** Although going to formal religious institutions was not highlighted in Samburu, adolescents in Nairobi and Meru recommended church as a preferred platform for engagement, particularly in relation to adolescents who were not in school. In those two counties, adolescents reported to attend church regularly and regarded it as a familiar and trusted source of information. Existing interventions have already demonstrated the value of using the church and church youth groups to deliver adolescent nutrition education, and with the support of the Inter-Religious Council of Kenya (IRCK), it may be possible to coordinate and scale interventions.
- **Schools:** For adolescent boys and girls in Nairobi and Meru, schools were a preferred venue to effectively communicate information. School was less of a key avenue discussed in research sites in Samburu, due to lower attendance. The opportunity provided through school clubs was highlighted in Meru, in both the workshops and the technology survey. It was noted, however, that using school as a platform was self-limiting as it only reached adolescents who were in-school, and therefore some of the most vulnerable adolescents, such as children of food insecure families (who are re-directing school fees to purchasing food), pregnant girls, mature minors and adolescents engaged in income generating activities, were likely to be missed. As the Long Rain Seasons Assessment Report (KFSSG, 2017) predicted, because of increased food insecurity in both Samburu and Meru North into 2018, schools may not be the best immediate platform to reach the most vulnerable in these two counties. As one girl in Maua concluded, *'Some of us are learned and some of us are not in school, but don't forget us if we are not in school and don't have the [school] certificate because it is not our fault we are out of school'*.
- **Technologies:** Adolescent respondents of the technology survey and participants in the workshops highlighted the potential power of mobile technology, particularly for older adolescents. Nairobi was

the site to show the clearest age-group differences, with older adolescents having more access to mobile, radio and television. The internet also appeared to be used more frequently, and often unsupervised, by older adolescents in Nairobi and Meru, and mainly for social media (particularly Facebook and Whatsapp) and Google searches. This suggests technologies may be easier for older adolescents to access. When targeting girls through TV or radio, it is important to note that they may listen in the company of their parents, whereas boys were more likely to be alone or with friends. The gender gap in TV access in Meru was also notable. Overall, there were fewer gender differences in Samburu than Meru, most likely because technology was less available for the entire community. Radio may have untapped potential for reaching adolescent girls, although not necessarily in more remote parts of the country. Television was generally more popular than radio, although access was lower. Although access to technologies were limited, adolescents spoke with excitement about the media which they were familiar and noted their potential if/when coverage improves. Adolescents highlighted the need to demonstrate that information conveyed through a new technology was reliable.

- Existing spheres of influence: Across all three counties, adolescents recommended tapping into the existing spheres of influence, rather than attempting to establish new or parallel platforms. Three groups of key influencers were forwarded: 1) people whose buy-in and support is vital, for example, caregivers, husbands and mothers-in-law (specifically for married female adolescents) and community leaders; 2) people who act as effective channels for delivering information and messaging, including caregivers (usually mothers for younger adolescents), peers (for older adolescents), teachers (for those in-school) and religious leaders (less relevant in Ndoto, Samburu); and 3) people who should be directly targeted or included in adolescent programme activities, mostly caregivers. Working at multiple levels to ensure different actors of influence were engaged was seen to be key, particularly in contexts where adolescents were receptive to numerous influencers, the relative importance of whom could change over time from young to older adolescents.
- Mentors: Regular face-to-face social interactions were prioritised by adolescents in all three counties. Their preference for in-person exchanges and dialogue was highlighted by adolescent boys who were more likely to trust the information they received and perceive it to be of good quality if it came from somebody who they were socially close to, but who they respected or looked up to. As boys in Utalii asserted, *'We want somebody who has already passed this stage to come and explain it to us, but you cannot bring someone who is 65 to talk to us, then we could not be free. We want somebody who is youth friendly'*. Building on this, adolescents favoured a system of mentors who could act as role models and with whom they could have two-way exchanges. In Samburu and Meru, local stakeholders emphasised that such engagement was well aligned to their oral tradition and in Samburu, cascading knowledge from older to younger boys across age-sets and from older girls to younger was known to be effective and could support positive behaviour. The same was true for both boys and girls in Nairobi, although represented through sports team rather than traditional age-set systems as in Samburu.
- Ambassadors: Drawing on their experiences with the political campaign of 2017, adolescents noted that having a well known person spearhead a movement that they felt part of or committed to could be powerful. Ambassadors who could exert influence at scale, even on sensitive issues, included footballers and musicians like Diamond. Several stakeholders highlighted the work of Josephine Kulea (founder of Samburu Girls Foundation) who successfully campaigned against female circumcision and was widely known and respected across Kenya. UNICEF is working with King Kaka, a music celebrity, as their agency ambassador. The considerations outlined below should be taken into account in the selection of national, county or local ambassadors.

Table 18 (below) summarises the key influences and delivery channels identified by adolescents who participated in the workshops.

Table 18 – Key influencers and delivery channels identified by adolescent participants by age and location

		Nairobi		Samburu		Meru	
		10-14 years	15-19 years	10-14 years	15-19 years	10-14 years	15-19 years
Key influencers	Caregivers, parents, parents-in-law	✓	✓	✓	✓	✓	✓
	Husband, boyfriend, girlfriend		✓		✓		
	Siblings	✓	✓	✓	✓	✓	✓
	Peers	✓	✓	✓	✓	✓	✓
	Schools	✓	✓	✓	✓ ³¹	✓	✓
	Religious institutions	✓	✓		✓ ³²		✓
	Organised groups	✓	✓		✓		✓ ³³
	Local leaders	✓	✓		✓	✓	✓
	Politicians		✓			✓	✓
	Health facilities		✓ ³⁴		✓		
Delivery channels	Informal community spaces	✓	✓	✓	✓	✓	✓
	Clubs, groups with peers	✓	✓	✓	✓	✓	✓
	School	✓	✓	✓		✓	✓
	Religious institutions	✓	✓			✓	✓
	Key influencers (as above)	✓	✓	✓	✓	✓	✓
	Mentors		✓	✓	✓		✓
	Ambassadors				✓		✓
	Radio	✓	✓	✓		✓	✓
	Television	✓	✓			✓	✓
	Mobile	✓	✓		✓	✓	✓
	Internet		✓				✓
	Social Media		✓				✓

Considerations for delivery

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’. The mechanisms of engagement (e.g. through key influencers, modes of engagement, various delivery channels) are important, but the tone of the engagement is also critical. Throughout the research, adolescents clearly articulated their priorities and needs related to engagement, highlighting key considerations for how engagement could be improved or maximised.

- *‘Come to us, fit around our lifestyles’*: Adolescents stressed the importance of taking messages to them at the most local level. In Nairobi, hustling meant adolescents moved around and were *‘difficult to pin down’*, and as caregivers in Ngomongo asked, *‘Most of the time they are by the roadside – who will teach you by the roadside?’*. It was widely agreed, therefore, that interventions must be tailored to fit around the often chaotic lifestyle of adolescents and recognise their competing priorities. As one adolescent concluded, *‘You need to do short forums because most of us can’t stay for long because we have to hustle. We are out of school and we have to help feed our families’*. A good example of how to reach informal settlement dwellers was the approach taken by Well Told Story who gave their comic-book ‘Shujaaz’ to hustlers to distribute (described above). Similarly, in Samburu, it was agreed that for an intervention to be successful, it must have a high degree of flexibility so that it could fit with the lifestyle of the pastoralist communities. This was a key factor that made adolescents receptive to the *Lochoro* education programme. Adolescent mothers in both Samburu and Meru emphasised that to

³¹ Only for those older adolescents in-school

³² Only for those older adolescents in-school

³³ Only those older adolescent girls who were part of the local research partners’ programme

³⁴ Only young mothers in Utalii, not Ngomongo

enable them to fully participate in any kind of project, they had to be allowed to bring their children, or arrangements had to be put in place for them to be cared for.

- 'Use our groups, don't group us': In Nairobi, with the exception of younger boys who emphasised the importance of *'boy time'*, adolescents preferred to be grouped together unless interactions were likely to be particularly sensitive or result in participants feeling ashamed. In Samburu, it was noted that in addition to dividing groups by gender, it was also important to recognise participants' life stages, so it may be more effective to engage married girls and young mothers separately from unmarried girls, and similarly to engage boys pre- and post-circumcision. When relief foods are distributed, *morans* explained they cannot queue with women so often miss out. Sub-groups described by participants in the study (both boys and girls) included: younger adolescents 10-14 years, older adolescents 15-19 years, in-school adolescents, out-of-school adolescents, orphans, domestic workers, married adolescents, young mothers, youth with HIV, pastoralist/highly mobile adolescents; agricultural labourers, those engaged in income generating activities, and adolescents involved in *'hustling'* in informal settlements.
- 'Make it entertaining': use music, dance and sport: Overall, great significance was attributed to any form of engagement being first and foremost entertaining, but also to be informative and understandable. The use of music to attract and sustain the attention of adolescents was highlighted by participants across the three counties. In Nairobi, they suggested using reggae, dancehall and roots, but not *Zilizopendwa* (older English-language classics such as Tina Turner and Marvin Gaye) or Gospel music. Dance or dance crews were also very popular. In Samburu, participants agreed that using songs in the Samburu language were an effective way to convey information, building on the important concept of ceremony. Local stakeholders also agreed, suggesting that a tipping point could be reached, *'They like listening to songs, so maybe you record a song or something funny in their language. Then you give it to one moran, and if it's funny they will all want to hear it, so they start giving it to each other and it will circulate until everyone knows'*. Sports, specifically football, was a favourite activity for adolescent boys across all three counties, and also for girls in Nairobi. One of the few adolescent nutrition interventions in Kenya, implemented by GAIN, successfully used football as a medium to convey nutrition education. In the workshops in Samburu, when asked to draw themselves doing their favourite things, all the adolescent boys drew themselves playing football, sports or cycling.
- 'Show us real experiences': Adolescents confirmed that they found *'real life'* stories to be the most engaging and affecting way of sharing and learning from experiences. As one participant suggested, *'Use videos of people, because when you see someone go through what you are going through you feel encouraged'*. The need for activities to be interactive and entertaining was emphasised. This was exemplified in the participants' engagement in the workshops, and for the adolescent girls, in the energy they committed to the photowalk activity. Adolescents wanted active approaches that were face-to-face and gave them a chance to ask questions, rather than solely passive methods like billboards, brochures and posters.
- 'Speak our language': Across all the sites, the use of spoken local language (Kimeru, Samburu and Sheng) was emphasised. Written media were not prioritised as they would not benefit adolescents who were illiterate, but for those who were in school, Kiswahili could also be used in addition to local languages. Adolescents also highlighted the benefits of tailoring language to fit their colloquialisms and make associations with *'what is trending'*. In-line with this, adolescents across sites explained the importance of being spoken to with respect in order for them to feel comfortable engaging in offered services.
- '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 (such as billboards, brochures and posters), 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. Adolescents emphasised the fact that established community-level mobilisers such as community leaders and health volunteers were likely to *'Go and take the people they know, their cousins, his children, his grandchildren'*, and the most vulnerable or difficult to reach adolescents were at risk of being further marginalised. A common recommendation was that whilst organisations may not be able to change power dynamics in communities, they could diversify communication channels, and employ multiple message streams that are likely to reach more people. It was suggested that providing cash to meeting participants (a *'sitting fee'*) was a key expectation that should be addressed transparently before meetings, particularly with older age-groups of adolescents.

- *'Balance tradition and modern'*: Through their food aspirations, adolescents in Meru and Samburu showed a conflict between desiring novel, 'foreign' foods and yearning for traditional foods specific to their cultural groups (milk and meat in Samburu, yams and arrowroot in Meru). This was less apparent in the Nairobi sites, perhaps due to its cosmopolitanism and the relatively greater penetration of global food-stuffs (notably including airline food rejects brought to the dumpsite). Approaches need to appeal across the spectrum. A local government stakeholder in Samburu described an alternative rites of passage ceremony offered in particular areas of Samburu North in lieu of circumcision,

When they reach class eight or form two we shall do what we call the alternative rite of passage, whereby we put them in one of camps two weeks in a school in all the boarding schools during the holidays... from there we do some seminars, counselling, guidance, we talk about what happens in the body. And then there's a day whereby all of them do what we call graduation. So psychologically now they feel like they have joined adulthood like any other else. So they will not have that stigma of being told that you have not been initiated.

None of the adolescent participants had participated in one of these ceremonies, but it was seen to be positive example of *'updating but maintaining'* the traditional importance of 'ceremony' during adolescence without the risks associated with female circumcision.

- *'With food, we need energy now...'*: The need to show immediate benefit to secure adolescents' interest and buy-in was emphasised across the three counties. In Nairobi, this was important given the transient hustling lifestyle (as one girl commented, *'we don't see the difference between today and tomorrow'*). In Samburu it was necessary so that adolescents would prioritise engagement above their many other household and community responsibilities. In Meru, where adolescents appeared most receptive to things that were *'fast'* and *'readily available'*, their attention had to be quickly captured. Messages around food shouldn't be targeted to improving their health for their longevity, but around giving them enough energy and focus for the present. Providing food was another factor requested to attract this age-group to attend meetings or information sessions.
- *'Build us for the future'*: Although adolescents' wanted messages on nutrition to be focused on 'the now', they stressed that through engagement activities adolescents should be *'assisted to foresee their future'* through building skills and interests. Adolescents were keen to showcase their skills and were most receptive to learning when it was bolted on to activities that they enjoyed and were good at. Adolescent girls in Samburu expended a large proportion of their resources (both time and money) on beads to make the bead necklaces of which they were particularly proud. It was suggested that finding ways to link with such activities would be an effective entry point to engage adolescents, particularly as they were likely to be more confident and self-assured when participating in a familiar pastime.

Conclusion and recommendations

The world currently has the largest generation of 10-19 year olds in history (UNFPA 2017). As a population group, unique health concerns and needs are associated with adolescents and as target group they require specific nutrition interventions. There is clear evidence of the growing disparities among adolescents and youth within and across countries. Demands on young people are new and unprecedented and those who live in poverty face major disadvantages. With the Sustainable Development Goals, the global policy landscape has shifted and adolescents are being recognised as a significant population that deserve greater visibility and attention.

This research gathered new empirical data in Kenya on the experiences, needs and priorities of adolescents regarding their health, nutrition and sustainable development, and established their engagement preferences in different contexts. Kenya's Vision 2030 places young people, including adolescents, at the centre of the country's development agenda. With this strong national framework, there is scope to further support the implementation of adolescent specific policies and develop guidelines that ensure quality programmes are in place.

In conclusion, a series of user-centered recommendations are made in relation to strengthening the visibility of adolescents; influencing adolescent nutrition; engaging with adolescents; the platforms for engagement; and entry points for strategic partnerships. Site-specific recommendations are then clustered by county (regarding (priority issues affecting adolescent nutrition; key platforms; priority programming areas; and key considerations), and finally, higher-level recommendations are presented for the government's consideration. A summary table that collates key policy and programming implications is presented at the end of the chapter.

Thematic recommendations

Strengthen the visibility of adolescents

- Kenya 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 prevent them from seeking youth-orientated services. Interventions must be sensitive to variables including age, gender, socio-economic status, life experiences / stages, livelihoods and ethnicity. Effective engagement should target groups as defined and understood at the community level.
- The tendency at both policy and programmatic levels 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.

- ‘Adolescents’ must not be interpreted as a homogenous or standard group. Within this age group, different life-stages occur and should be accounted for. Similarly, adolescents are subject to a range of socio-economic and contextual factors that shape their lived realities. These sub-groups are not mutually exclusive, rather an adolescent can belong to or self-identify with multiple groups concurrently and over time. Assuming a user-centred design approach, interventions should therefore be developed in an age-, gender- and context-specific or -sensitive manner.
- Promising policy developments include the Food Security and Nutrition Policy (2011) and the Neonatal, Child and Adolescent Health Policy (2017), both of which highlight specific interventions for improving adolescent nutrition, and the National School Health Policy (2017), in which nutrition is one of eight key pillars. The challenge is to support these policies to be well implemented, and to advocate for the inclusion of adolescent nutrition in related policies that are being renewed, such as the National Youth Policy and the Nutrition Action Plan.

Influencing adolescent nutrition

- When taking adolescents as the central unit of analysis, it becomes clear that this group is uniquely affected in Kenya. 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 well-being.
- 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 can address 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 (for older adolescents); teachers (for those in-school); community leaders (for adolescent girls and boys of different ages); and religious leaders (less relevant in Ndoto and Samburu).

Securing their buy-in and support is vital in both generating demand and facilitating the timely utilisation of programmes and services. Mentors and ambassadors who were the face of campaigns targeting adolescents were also identified as powerful advocates, but who is best placed to act in this regard and specifically in relation to adolescent nutrition, requires careful consideration and further research.

- Adolescents took a high level of responsibility for their own food choices, and often for food preparation for their household. Adolescents can therefore be agents of change for family members and their 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; HIV prevention, treatment and management; livelihoods; agriculture; education; social protection; and participation, governance and leadership. There was a particular bias towards girls and sexual reproductive health and HIV programming. Overall, however, programmes were not implemented at scale and coverage was limited.
- Various platforms engaged adolescents at the community level. Adolescents discussed their preference for being engaged at informal community spaces, through clubs and groups with peers and with a strong support/mentoring component. For those in formal education, school was identified as a positive and trusted platform for engagement, although it was noted to be a selective channel given that not all adolescents (particularly older adolescents and girls) attended. There is scope to actively engage adolescents through religious institutions, although only in communities where religious practices are valued and are routine. Valuable lessons should be learnt from the Ministry of Health and Nutrition International pilot programme for weekly iron and folic acid supplementation (WIFS) and adolescent nutrition education to inform further engagement with religious institutions, particularly in terms of how 'youth friendly' they are.
- 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 technology was a popular means of communication, although adolescents in Samburu had markedly lower access to and usage of all technology platforms. Older adolescents appeared to have slightly more access to technology than younger adolescents, and the internet was most frequently used, unsupervised, by older adolescents in Nairobi and Meru, mainly for social media (particularly Facebook and WhatsApp) and for Google searches. Television was generally more popular than radio, although access to television was lower. Positive engagement through mass media channels was highlighted, such as the 'Youth Café' show on KTN News (television); KELIN talk shows on sexual reproductive health (radio), and *Shujaaz* (comic book and radio show). It is important to negotiate the use of new technologies with parents, caregivers and other 'gate-keepers', particularly if girls and younger adolescents are the target group for social media-based interventions.

Entry point for strategic partnership

- Actors already engaging adolescents in other sectors should be encouraged to collaborate with the Nutrition and Dietetics Unit and the Neonatal, Child and Adolescent Health Unit of the Ministry of Health. This will help mainstream nutrition-sensitive and nutrition-specific activities.
- Commitment to channels that can reach the most marginalised and vulnerable adolescents is needed. Adolescent programming must be creative and use approaches that target particular groups of adolescents (e.g. out-of-school adolescents and mature minors) in ways they prefer and are receptive to. Investment in these channels should be prioritised in mainstreaming nutrition-sensitive and nutrition-specific 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. The national move towards all health facilities adopting a 'youth friendly approach' is a realistic goal that should be supported as it is likely to have greater and more sustainable impact as opposed to creating sporadic and separate 'youth friendly services'. A youth friendly approach should engage adolescents in ways and through channels that adolescents 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 would help move away from the negative association between health facility attendance and sexual reproductive health issues.
- There is an urgent need to overcome bottlenecks in school feeding programmes and to improve the efficiency of school feeding, particularly in drought-affected zones. Portion sizes and micronutrient content should be adjusted to cater to the greater nutrient needs of adolescents as compared to younger children. School 'demonstration gardens' could supplement school meal provision with fresh products. Family contributions (e.g. in terms of foodstuffs, firewood or in-kind contributions) are also vital in some areas. Structural weaknesses inherent in the school system, including limited storage facilities for food products and poor access to water and sanitation need to be simultaneously addressed. Expanding school feeding programmes to 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.
- Including nutrition as a mandatory subject in the curriculum at both primary and secondary levels is an important component of educating adolescents about food and healthy eating. Teaching should include interactive and participatory learning experiences (e.g. through demonstration gardens). The ongoing inclusion of 'Food and Nutrition' as a key pillar in the School Health Policy, and the review of the life skills curriculum provides a valuable opportunity to further develop a holistic approach to school-based nutrition education.
- 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 to serve as an effective entry point to develop strategic partnerships with the private sector.

Site specific recommendations

A number of site-specific programming recommendations were also captured. These are likely applicable to areas with similar socio-economic and cultural contexts, although should not be seen to be generalisable.

Nairobi county – low-income informal settlement populations

Priority issues affecting adolescent nutrition to target:

- Reliance on poor quality, roadside food, both at the level of household food choices and food regulation standards, including issues of food safety and food hygiene.
- Food insecurity and poverty leading to scavenging food from dumpsites and transactional sex.
- Early sexual debut, unprotected sex and sexual violence increasing risk of pregnancy and HIV.
- Caregivers' and adolescents' knowledge of the cheapest, healthiest foods available.
- Adolescents' limited food preparation knowledge.

Priority programming areas:

- Food regulation and food safety interventions.
- Vocational training activities for those older/out-of-school adolescents, that include support for business skills and start-up equipment.
- Positive livelihood/ income generating programmes and economic empowerment for adolescents and their households.
- Innovative urban food initiatives (e.g. sack/bag gardening).
- Gender programming targeting security, sexual violence, sexual and reproductive health and awareness-raising around children's rights.
- Access to the education system, including improved school meals, that adolescents can access for its protective capacity.
- Nutrition education for the cheapest, healthiest foods and food preparation for caregivers and adolescents.

Key platforms:

- Peer-group meetings, including establishing new groups or through existing CBOs and NGOs and other CSOs. These would preferably offer a trusted space, mentor-like figures, might involve sport, music or dance, and have a focus on learning, skills training and/or livelihood activities.
- Religious institutions.
- Schools (for those in-school).
- Places of hustling – e.g. market-places using loud-speakers, music and events/roadshows.
- Mobile, radio and television, especially for older adolescents.
- Mass and social media including Well Told Story's popular comic-book '*Shujaaz*' and the spin-off version for younger adolescent girls called '*Empress*'. Social media may be less relevant for younger adolescents.

Key considerations:

- Adolescents see themselves to be 'grown-up', as decision makers and as having agency over their lives. As such, messaging for adolescents should not use the same approaches as for children. The design of messaging should acknowledge adolescents' perceptions and higher degrees of self-determination.
- The hustling lifestyle is unorganised and unpredictable, and adolescents focus on now, not tomorrow, so immediate benefits should be emphasised.
- Food that has status and that is associated with people or places perceived to be in fashion and/or modern is particularly desirable.
- Pride and shame are key emotional drivers behind food choices and practices.
- Real-life stories and case studies are more engaging for adolescents in Nairobi.
- Music and dance should be considered as attracting attention of adolescents – reggae, dancehall and roots music was most commonly preferred.
- Trust is key, and security is a challenge, therefore going through established channels is advised in informal settlements and surrounding urban areas.
- Caregivers should be engaged as key participants in the process and be empowered both economically and with knowledge to better guide their children.

Meru county – Agricultural / cash crop populations

Priority issues affecting adolescent nutrition to target:

- Drought impacting food production and household-level food security.
- Focus on growing cash crops and staple food stuffs at the expense of diversified kitchen gardens, hampered by a lack of farming knowledge, skills and equipment.
- Adolescents' participation in high-energy expending income generating activities, mainly agricultural labour.
- Adolescents' consumption of *miraa* affecting appetite and overall health.
- Early sexual debut and negative attitudes towards contraception increasing risk of pregnancy and HIV.
- Low access to education, hampered by lack of school fees and lack of reliably provided school meals.
- Caregivers; and adolescents' knowledge of the cheapest, healthiest foods available.

Priority adolescent programming areas:

- Agricultural programmes, including irrigation systems and agri-nutrition activities alongside education for adolescents and their households to encourage diverse kitchen gardens.
- Positive livelihood/ income generating programmes and economic empowerment for adolescents and their households.
- *Miraa* campaigns to control adolescents' consumption.
- Gender programming targeting sexual and reproductive health and awareness-raising around children's rights.
- Access to education, including improved school meals, kitchen gardens, demonstration gardens, that adolescents can access (holistic support to schools).
- Nutrition education for the cheapest, healthiest foods and food preparation for caregivers and adolescents.

Key platforms:

- Peer-group meetings, including establishing new groups or through existing groups, e.g. Mother's Groups for pregnant adolescents/adolescent mothers. These would preferably offer a trusted space, mentor-like figures, involve sport, music or dance and have a focus on learning, skills training and/or livelihood activities. There few active existing programmatic platforms due to the assumption Meru is performing relatively well to other areas of Kenya.
- School (for those in-school).
- Places of work (e.g. *shambas* for cash crop workers).
- Religious institutions.

Key considerations:

- Adolescents in Meru desired foods that were novel, fast, energy-giving, filling and '*fashionable*'.
- Food is tied up into status, and food considered '*foreign*' and novel were attractive, particularly processed and packaged foods.
- Adolescents in Meru liked to be seen eating what they see their peers eating.
- Similarly, '*traditional*' knowledge about healthy foods, passed down orally between generations, also had significance for adolescents.
- Caregivers should be engaged as key participants within programming and be empowered both economically and with knowledge to better guide their children. Leaders and religious institutions should be engaged to ensure their buy-in and a facilitating environment.

Samburu county – pastoralist / ASAL populations

Priority issues affecting adolescent nutrition to target:

- Current and regular drought and conflict issues leading to crisis-level food insecurity, limiting access to water and food and reducing livestock for the entire household.
- Poor knowledge, skills and equipment for participating in agricultural practice, although voiced interest from older adolescent boys (*morans*).
- Early marriage, low contraceptive access and uptake and early pregnancy.
- Restrictive eating practices, most significantly for adolescent boys and pregnant adolescent girls.
- Cattle-rustling limiting health service provision in the area and endangering *morans* and other young herders.
- Low access to education, hampered by lack of school fees, inflexible system for the pastoralist lifestyle and lack of reliably provided school meals.
- Production and consumption of alcohol by household heads and by adolescents, notably unknown effects of residue consumption, and the social effects of caregivers' habitual drinking (e.g. increases adolescents' household responsibilities).
- Poor knowledge (and in some cases negative attitude towards) preparation of traditionally uneaten, but available protein sources such as chicken.

Priority programming areas:

- Agricultural programmes, including irrigation systems and agri-nutrition activities alongside education for adolescents and their households that integrate with pastoralist practice. Access to land should be considered during this.
- Gender programming targeting early marriage, female circumcision, sexual and reproductive health and awareness-raising around children's rights.
- Peace-building and security.
- Access to education including improved school meals supplemented by demonstration gardens, that adolescents can access.
- Positive livelihood/ income generating programmes and economic empowerment for adolescents and their households.
- Nutrition education, including food preparation for foods not traditionally eaten but available (e.g. chicken) for caregivers and adolescents.

Key platforms:

- Peer-group meetings, including establishing new groups or through existing groups, e.g., mother's groups for pregnant adolescents/adolescent mothers and the *moran's* regular meetings for older adolescent boys. These would preferably be social-group specific, offer a trusted space, mentor-like figures, involve music, dance or sport and have a focus on learning, skills training and livelihood activities. There are fewer existing government and non-government programmatic platforms in Samburu North, attributed to the insecurity of the area being a deterrent to these activities.
- Ceremonies, including marriage and age-set ceremonies (consider alternative rites of passage, detailed above) when adolescents are gathered together.
- Informal education structures (see *Lchektuti* case study, detailed above).
- Radio. Community dialogues around radio access for girls may be required to ensure gender equity in access.
- Music. The use of songs that can be spread via word-of-mouth.

Key considerations:

- The male adolescent lifestyle changes at mid-adolescence (15 years). This sees him move between being a child and a junior elder, and shift primary activities from herding to protecting the community. For females the greatest lifestyle change is associated with marriage and becoming a mother. Messaging should acknowledge these shifts in social position.

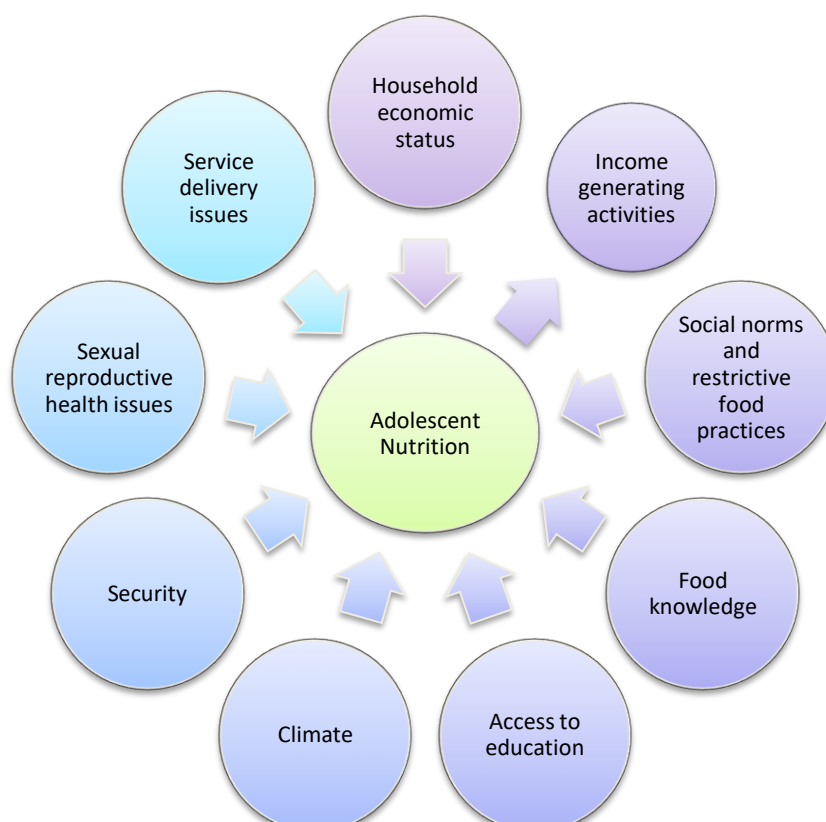
- Adolescents in-school are more attracted to the modern and foreign, whereas those out-of-school are more interested in traditional food-stuffs, usually animal products. It would be important to take advantage of this when working with the private sector.
- As an area with an oral tradition, stories and songs can be passed through word-of-mouth. Community level mentors/ambassadors can therefore be effective.
- Livestock have emotional meaning attached to them, and are at the root of the societal respect, which could be used meaningfully in messaging design.
- Caregivers and elders/leaders themselves should be engaged as key participants in the process.
- Despite being close neighbours, cultural practices differ between Samburu and Turkana. In this area of ethnic conflict it is important to offer interventions to both sides.
- Ensure *morans* are able to access food-related services by offering to see them separately from women, if not they are likely to exclude themselves.

Key policy recommendations

The Ministry of Health is well positioned to define its national adolescent nutrition programming. Promising policy developments in Kenya include the Neonatal, Child and Adolescent Health Policy (2017) and the Food Security and Nutrition Policy (2011) which both highlight specific interventions for improving adolescent nutrition, and the National School Health Policy (2017), in which nutrition is one of the key pillars. Adolescent nutrition is also being discussed as part of ongoing policy renewals including the National Youth Policy and the Nutrition Action Plan. The challenge is to support the implementation of these policies and their translation into action. This should be a priority moving forwards.

In defining its national programming, key considerations the Ministry of Health would be advised to take into account include:

- **Prioritising vulnerable adolescents:** The research identified nine key factors affecting adolescent nutrition, that in turn also contribute to poor adolescent health and overall well-being overall (see figure below). These can serve as guiding criteria for selecting who and where to prioritise interventions (i.e., by population group and/or geographic area).



- **Promoting evidence-based nutrition interventions:** The Kenyan evidence-base for adolescent nutrition programming is growing to include research studies conducted by MOH, NI, GAIN, Population Council and others. The successes, challenges and overall effectiveness of existing adolescent nutrition interventions should be considered in the process of policy and programme development, as should global learning (e.g. the 'promising' interventions for adolescent nutrition interventions the Lancet recommends).
- **Mainstreaming nutrition:** There are two equally important approaches to mainstreaming: mainstreaming nutrition into wider adolescent programming (SRH, education, social protection etc.); and ensuring on-going nutrition programmes are more targeted to adolescents. Both approaches will likely require material development, capacity building and mentoring.
- **Using consortia for cross-sectoral adolescent programming:** Structures in the MoH have been established to support adolescent programming and advocacy efforts and coordination (i.e., the Adolescent Technical Working Group under the Neonatal Child and Adolescent Health Unit and the Adolescent Nutrition Technical Working Group under the Nutrition and Dietetic Unit). There is a need for a holistic and systems-based approach to programming beyond the health-sector with strong cross-sectoral consortia to tackle the various determinants that contribute to adolescent nutrition.
- **Employing social behaviour change communication and messaging alongside food security approaches:** National level nutrition social behaviour change communications (SBCC) strategies that facilitate localised development of nutrition messaging and materials in which adolescents are active participants, should be developed. The strategy should guide best platforms, modes and methods of effectively engaging various adolescent target groups to convey key nutrition knowledge and encourage related healthy eating practices. This research highlighted that for many communities, SBCC strategies should only be delivered alongside food access approaches to ensuring household food security.
- **Empowering adolescent participation and leadership:** Engaging with adolescents is a critical component in sustainable development. Adolescents must be involved in programme design and implementation. They should be being encouraged to take leadership roles and to influence their own development and future wellbeing. Such empowerment should also be advocated for through the ongoing review of the National Youth Policy.
- **Filling data and research gaps and strengthening monitoring and evaluation:** To ensure the nutritional status of adolescents is better understood and monitored over time, more granular quantitative data is needed (e.g. through disaggregating survey and HMIS data and collecting further data specifically on adolescents). Gaps in qualitative data regarding adolescents' complex engagement with food should be purposively addressed. Effective monitoring and evaluation should be a core component of any programme so its implementation, impact and outcomes can be rigorously assessed and any unintended consequences determined. Programmes should be designed to be agile and responsive to changes in context.
- **Engaging the private sector:** The private sector, including the food industry, media and communications are actively engaged to help influence what food is accessible and valued. This sector targets adolescents as a key audience for information and products, and through market research, adapt messaging to the needs and motivations of adolescents, tailoring information and products to appeal specifically to them. Through corporate social responsibility and other initiatives, the private sector should be further engaged and incentivised to exert influence on adolescents to promote choosing healthy foods and the adoption of appropriate nutrition practices.
- **Advocacy:** The unique needs of this age-group need to be advocated for. Key stakeholders across sectors need to be further sensitised about the value of engaging and targeting adolescents. This will help stakeholders be intentional about including adolescents in programmes and improving their nutritional well-being by mainstreaming nutrition across all sectors. Relevant national policies should be well-communicated to actors at the county-level. Effective advocacy should support the allocation of dedicated funds to support the expansion and sustainability of adolescent nutrition programming.

Summary of key policy and programme implications

Theme	Key considerations
Available food and food sources	<ul style="list-style-type: none"> • Make diverse, healthy, natural and affordable foods available and attractive to adolescents and their families, particularly in times of scarcity. Promoting healthier foods in small shops and food carts would increase their availability to adolescents who should be encouraged to choose healthier food over other options. • Curb the promotion and availability of unhealthy foods to adolescents and their families. • Improve food safety in urban settlements, particularly in relation to marketers, food vendors and small
Food responsibilities	<ul style="list-style-type: none"> • 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.
Food status and aspirations	<ul style="list-style-type: none"> • 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. • Snacks and 'on the go' food are particularly appealing to this age-group, and so cheap, safe and healthy ready-made food should be made widely available. • Although many adolescents were attracted to food they considered 'novel', there are avenues for promoting both traditional and modern 'fashionable' foods that align with adolescent aspirations.
Household economic status	<ul style="list-style-type: none"> • Adolescents and their caregivers must be better informed about the most cost-effective healthy foods available to them. • Poverty is widespread, particularly in the ASAL region, 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. • Healthy food is often more expensive, or at least is perceived to be, so it may be may useful to explore reducing costs associated with healthy 'natural' products whilst simultaneously decreasing access to non-nutritious, unhealthy foods.
Income generating activities	<ul style="list-style-type: none"> • Income-generating activities are often prioritised over school attendance, and adolescents and their families need strong incentivisation for this age group to continue formal education. • 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.
Social norms and restrictive food practices	<ul style="list-style-type: none"> • 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 (future value). • Engaging with key male and adult influencers is critical. • Raising awareness around good nutrition during pregnancy also needs to be discussed in these forums. In parallel, initiatives should improve antenatal care, delivery practices and postnatal care to assuage fears around having large babies (and therefore restricting diet during pregnancy). Delivery with skilled attendance should be actively promoted. • Cheap, safe and healthy snack foods should be made available for pregnant adolescents, and consideration given to snacks in terms of their value as food and micronutrient supplements. • <i>Morans</i> in Samburu are not able to access food-based services if women are present. This should be accounted for in programming to ensure they receive appropriate provision.
Food knowledge	<ul style="list-style-type: none"> • 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, particularly in areas where nutritious foods are not normally consumed and in urban settlements where there is a reliance on pre-prepared food.
Educational attainment	<ul style="list-style-type: none"> • 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 of both boys and girls, and the housework / household responsibilities of girls..
Climate	<ul style="list-style-type: none"> • 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.
Security	<ul style="list-style-type: none"> • Whilst it is important to invest in longer-term solutions to security issues, in the short- to medium-term girls in unsafe urban centres must be reached where they are and not left behind due to their constrained environment. • Links between social norms for herders, cattle-raiding activities, nutrition and community food security
Sexual & repr. health	<ul style="list-style-type: none"> • 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 well-being
Service delivery issues	<ul style="list-style-type: none"> • 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 reproductive health 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. • 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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KEMRI/RES/7/3/1

June 20, 2017

TO: **DR. THERESA JONES,
ANTHROLOGICA,
PRINCIPAL INVESTIGATOR,**

Dear Madam,

RE: **NON-KEMRI 574 (RESUBMISSION II OF INITIAL SUBMISSION): FORMATIVE
RESEARCH FOR ADOLESCENT NUTRITION PROGRAMMING IN KENYA**

Reference is made to your letter June 19, 2017. The KEMRI Scientific and Ethics Review Unit (SERU) acknowledges receipt of the revised study documents on June 19, 2017.

This is to inform you that the issues raised during the 263rd Committee B meeting of the KEMRI Scientific and Ethics Review Unit (SERU) held on **May 17, 2017** have been adequately addressed.

Consequently, the study is granted approval for implementation effective this day, **June 20, 2017** for a period of one year. Please note that authorization to conduct this study will automatically expire on **June 19, 2018**. If you plan to continue with data collection or analysis beyond this date, please submit an application for continuation approval to SERU by **May 09, 2018**.

You are required to submit any proposed changes to this study to SERU for review and the changes should not be initiated until written approval from SERU is received. Please note that any unanticipated problems resulting from the implementation of this study should be brought to the attention of SERU and you should advise SERU when the study is completed or discontinued.

You may embark on the study.

Yours faithfully,

**DR. MERCY KARIMI NJERU,
ACTING HEAD,
KEMRI SCIENTIFIC AND ETHICS REVIEW UNIT**

In Search of Better Health

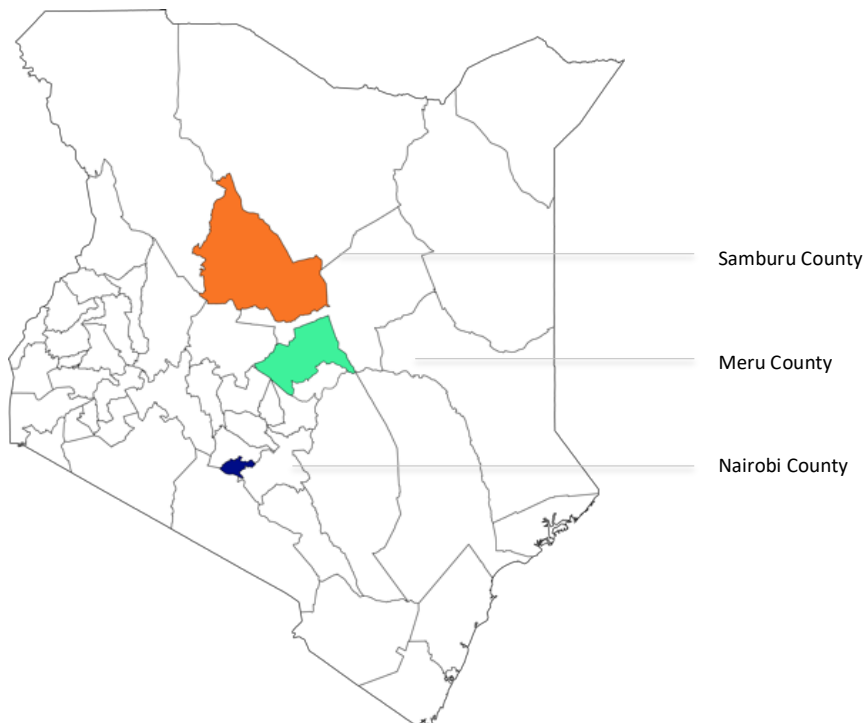
Annex 2 – Stakeholders involved in the mapping of adolescent programmes

Type of institution/organisation	Name of institution/organisation
Government	Ministry of Health
	Ministry of Education, Science and Technology
	Ministry of East African Community, Labour and Social Protection
	Ministry of Agriculture, Livestock and Fisheries
	Kenya Institute of Curriculum Development
UN	FAO
	WHO
	WFP
	UNFPA
	UNICEF
INGOS	GIZ
	Population Council
	World Vision International
	Pathfinder International
	LVCT Health
	PATH
	Kenya Red Cross Society
	GAIN
	Nutrition International
	Save The Children
	Plan International
NGOs	Population Services Kenya
	Nutrition and HIV Project
	Education Development Centre
	DSW
	KELIN
	NAYA Kenya
	Centre for the Study of Adolescents
	Youth Changers
	I Choose Life Africa
	Centre for Behaviour Change and Communications
	Well Told Story
	Parenting Africa Network
	Family Health Options Kenya
	Inter-Religious Council of Kenya
White Ribbon Alliance	
BLAST	
Research organisation	Kenya Medical Research Institute
	Africa Population Health Research Centre
Private Sector	Safaricom
Parastatal	Kenyatta National Hospital – Youth Centre

Annex 3 – Fieldwork schedule

20 June	WFP/research partner briefing and planning meetings
21 June	National Level Key Informant Interviews
22 June	National Level Key Informant Interviews Briefing with local research partner County Level Key Informant Interviews
23 June	Data collection – Ngomongo Focus Group Discussion - caregivers of adolescents Adolescent workshops Key Informant Interview
24 June	Data collection – Ngomongo Key Informant Interview Adolescent workshops
26 June	Data collection – Utalii Adolescent workshops
27 June	Data collection – Utalii Focus Group Discussion - Female Caregivers of the adolescents Adolescent workshop
17 July	Data collection – Utalii Adolescent workshop Key Informant Interviews
19 July	Travel to Samburu Briefing with local research partner organization - World Vision International
20 July	County Level Key Informant Interviews Travel to Baragoi
21 July	County Level Key Informant Interviews
22 July	Data collection – Ndoto Key Informant Interviews Focus Group Discussion - Caregivers of adolescents
23 July	Data collection – Ndoto Adolescent Workshops
24 July	Data collection – Ndoto Adolescent workshops
25 July	Travel to Meru County Briefing with research partner organization – I Choose Life Africa
26 July	County Level Key Informant Interview Data collection Mikinduri Key Informant Interview Adolescent Workshops
27 July	Data collection Mikinduri Adolescent Workshops Key Informant Interview Focus Group Discussion - Caregivers of adolescents
28 July	Data collection Maua Key Informant Interviews Adolescent workshops
29 July	County-Level Key Informant Interviews Data collection Mikinduri Adolescent Workshop
31 st July	National Level Key Informant Interviews
1 st Aug	National Level Key Informant Interviews
2 nd Aug	National Level Key Informant Interviews
3 rd Aug	Debrief National and Regional WFP National Level Key Informant Interviews Rescheduled County Level Key Informant Interview (programme implementer in Samburu)
4 th Aug	Rescheduled County Level Key Informant Interview (programme implementer in Meru)
5 th Sept	Rescheduled County Level Key Informant Interview (local media in Samburu)

Annex 4 – Background to study sites



Map of fieldsites in Kenya

Nairobi

In the midst of rapid urbanisation, Nairobi County, the capital of the Republic of Kenya, is home to approximately 4.3 million people (County Integrated Development Plan, Nairobi County Government, 2017). The population living in slums or 'informal settlements' in Nairobi is estimated to number 2.3 million, approximately 60% of the county's population. Projections from the Kenya Household Survey (KNBS, 2013) estimated that by 2017, 16.5% of the population of Nairobi would be aged 10 to 19 years.

Historical land injustices, land grabbing and the influx of unskilled and semi-skilled job seekers from rural areas has led to landlessness affecting around 450,000 households living in informal settlements (Nairobi County Government, 2017). Nairobi's large and growing population is also driving environmental degradation in the County. Other contributors include increased number of vehicles, uncontrolled settlements, poor solid waste management, and untreated industrial discharge.

Nairobi experiences long rains between March and May and short rains between October and December. Although agriculture is not an emphasis in Nairobi, maize and beans are the main crops grown, as well as sweet and Irish potatoes, kale and cassava, although mainly on a small-scale. Due to limited space, land under crop cultivation is only 751.5 hectares, with an average farm size of approximately 0.0295 hectares, although there is a growth in green-houses and sack gardening (the practice of growing vegetables in earth-filled sacks) and green-houses (Nairobi County Government, 2017).

The manufacturing industry accounts for the highest formal wage employment followed by trade, restaurants and hotels. Construction, transport and communications also play a key role in the generation of wage employment. A large proportion of the labour force in Nairobi is self-employed in the informal sector (approximately 1,548,100 people, around 3.5 times the number engaged in wage employment) (Nairobi County Government, 2017). The informal sector largely entails small-scale, semi-organised and

unregulated activities that are paid via cash-in-hand or other often in-kind reimbursements (e.g. food stuffs). The majority of the informal settlement dwellers fall into this category.

Around 61.5% of the Nairobi County population use flush toilets as the main waste disposal method and 32% use pit latrines (Nairobi County Government, 2017). The remaining have no formal means of waste disposal. Informal settlements in particular have seasonal water scarcity and chronically low levels of access to sanitation.

Nairobi has a large number of health facilities of different capacities and specialties including Kenyatta National Hospital the major referral hospital in the country. In addition, it has 16 sub-county hospitals, 9 mission hospitals; 32 private hospitals; 38 public health centres; 45 private health centres, 30 public dispensaries, 84 private clinics and 22 public clinics (Nairobi County Government, 2017). The two fieldsites for research in Nairobi were Korogocho and Utalii Wards. Both are in Ruaraka sub-division, one of Nairobi's 17 constituencies. Ruaraka sub-division covers 7.2 km² of northeast Nairobi and includes five wards, each of similar population size.

Samburu

Samburu County is located in the northern part of the country in Kenya's Arid and Semi-Arid Land (ASAL) region. Samburu County is home to a number of ethnic groups, including the Samburu majority, the Turkana, Kikuyu, Somali and Meru. The 2009 Population and Housing Census estimated the county's population to be 223,947, with a 24.9 percent population rise between 2012 and 2017. Projections for 2017, estimate 26% of the population will be aged between 10 to 19 years (KNBS, 2010), higher than the national average.

The majority of Samburu County is communally owned land and used for pastoralist practices. The main livestock are indigenous cows, goats, sheep, camels and donkeys, with milk and meat the major livestock products (County Integrated Development Plan, Samburu County Government, 2016). Inter-tribal conflict is common in Samburu, particularly related to areas for pasture, water and cattle raiding. Although there is potential for irrigation in other parts of the county where rainfall is inadequate, the main crops, including sorghum, millet and certain varieties of maize, are grown in the highlands of Poro in Kirisia Division where there is adequate rainfall.

Samburu is an area of persistent drought. The driest months have traditionally been January and February, with the long rainy season between March and May, and short rains between July and August, sometimes extending into September. Wamba and South Horr have short rains in October and November. Rainfall has become increasingly less regular over recent years, and this has negatively affected crop farming and livestock rearing. Over the past decade, activities such as charcoal burning and felling trees for firewood have further contributed to environmental degradation. This has resulted in loss of property, livestock and crops for the majority of the county's population, and has exacerbated poverty, food insecurity and cattle raiding between tribes (Samburu County Government, 2016). On the 10 February 2017, the Kenyan Government announced a national drought emergency, and listed Samburu as one of the 23 most affected counties. Crisis-levels of food insecurity were projected to affect 3.5 million Kenyans by August 2017³⁵, as an ASAL county Samburu is proportionately more affected. The Long Rains Seasons Assessment completed by the Kenya Food Security Steering Group (KFSSG) in July 2017 estimated that 48% of the population of Samburu, approximately 137,000 people require food assistance (KFSSG, 2017).

It is estimated that Samburu has 149 primary schools, 19 secondary schools and three hospitals, which include a county hospital in Maralal, a sub-county hospital in Baragoi and a mission hospital in Wamba (Samburu County Government, 2016). Central Samburu has the largest concentration of development

³⁵ <http://reliefweb.int/sites/reliefweb.int/files/resources/Kenya%20Sitrep%20No.%203.pdf>

partner field offices and programmes, including WFP, World Vision, International Medical Corps, and BBC Media Action.

Meru

Meru County lies to the East of Mount Kenya. Projections from the 2009 Kenyan Population and Housing Census estimated that 1,601,629 people would live in Meru by 2017, with 22.3% between 10-19 years (KNBS, 2010). The Ameru community are the majority in Meru and include the sub-tribes Imenti, Tigania and Igembe. Kimeru is the main ethnic language, although Kiswahili and English are also widely spoken (Meru County Government, 2013).

The Long Rains Seasons Assessment completed in July 2017 estimated that 11% of the population of Meru North, approximately 88,300 people require food assistance (KFSSG, 2017).

As an agricultural area, the majority of land is used for crop farming and livestock keeping. Large-scale farming by private companies and livestock farming are also practiced. The county has a wide range of agro-ecological zones, ranging from the upper highlands to lower midlands. The major food crops include mangoes, citrus, coffee, maize, beans, bananas, pigeon peas and cow peas. The major cash crops include tea, coffee, *miraa* (khat) and bananas. The main economic activity is agriculture, with the agricultural sector contributing 80% of the average household income. An estimated 35% of children (under 18s) are engaged in labour activities in Meru, largely within the agriculture sector, and particularly within *miraa* production. The county has experienced increased periods of drought, erratic rainfalls and higher temperatures as a result of changing climatic conditions (Meru County Government, 2013).

The average household land holding is 1.8 hectares, whereas the average size of large-scale land ownership is 18.25 hectares (Meru County Government, 2013). This unequal distribution of land has been compounded by rapid population growth and the rising cost of land. Cultural practices denote that males predominantly inherit land from their fathers.

Livestock is mainly reared on a small-scale. It is estimated that there are a total of 2,000 privately owned and communal fishponds in the county. Forestry products such as timber, wood fuel, charcoal and seedling production are of high demand in the county, which has led to deforestation especially across the Mount Kenya region (Meru County Government, 2013).

The county has one Level 5 hospital, eight Level 4 hospitals, 31 Level 3 facilities (health centres, nursing homes and three maternity homes) and 260 Level 2 facilities (dispensaries and clinics). There is one centre providing Adolescent Friendly Services. Meru has 792 Early Childhood Development Centres, 647 primary schools and 192 secondary schools. Tertiary education establishments include Meru University of Science and Technology and Kenya Methodist University. The county hosts other university campuses and a number of teaching training, technical institutes and private colleges (Meru County Government, 2013).

Meru County is predominantly Christian, including Catholics, Presbyterians, Anglicans and Methodists. Muslims and Hindus are the smallest religious group and mostly live around Meru town.

Annex 5 – Research tools

1. Topic Guide
2. Interview guide – UN agencies, I/NGOs stakeholders and research implementation partners
3. Interview guide – Representative from government ministries
4. Interview guide – Representative from private industries
5. Focus group discussion/interview guide – Community leaders, members and caregivers
6. Technology survey – Adolescent/youth communication and technology channels
7. Adolescent workshop, 10-14 years old
8. Adolescent workshop, 15-19 years old

1 – Topic guide

DEFINING ADOLESCENCE

- How to define this concept? (childhood, adolescence, adulthood)
- Bio-socio-cultural markers of adolescence
- Rituals and transition markers (e.g. rites of passage toward becoming an adult, etc.)?
- Validity and usefulness
- Does the existence/length of adolescence change with context (e.g. during drought, civil unrest etc.)?
- Recreational activities of adolescents? Routine daily life activities?

INGO/GOVERNMENTAL POLICY & PROGRAMMING

- *Background / Overview*

Work with adolescents: Where? National/County levels? What programmes/interventions here and why?
For which types of adolescents (gender, age, etc.)? Other typologies (out of school, teen mothers, etc.)?
Work on nutrition: Where? National/County levels? What programmes/interventions here and why?

- *Policy implications of working with adolescents*

National policy around adolescents/nutrition

National health policies for adolescents, including sexual and reproductive health, HIV, mental health etc.

National gender policies, legislation and programs

Social accountability and participation for adolescents/nutrition

Areas for collaboration with government? NGO coalitions? Etc.?

HEALTH ISSUES

- *Social, cultural and economic barriers to health services for adolescents*

Socio-cultural norms

Gender norms and practices

Household and village (priorities and negotiation)

Informational sources (e.g. social network, Internet, peers, etc.)

Social relationships, decision making continuum and agency to act

Role of healthcare workers/Bias in access for underage or unmarried girls (e.g. contraceptive services)

Participation of adolescents in their health system – inc. social accountability systems

- *Social, cultural and economic barriers specific to SRH services for adolescent girls*

Socio-cultural norms

Household and village (priorities and negotiation)
Informational sources (e.g. social network, Internet, peers, etc.)
Social relationships, decision making continuum and agency to act
Role of healthcare workers/Bias in access for underage or unmarried girls (e.g. contraceptive services)

- *Drivers and consequences of early marriage and teen pregnancy*

Perception of issues

Increasing or decreasing occurrence (why?)

Consequences for adolescent girls (school drop-out, marriage, etc.)

FOOD AND NUTRITION

- *Perceptions of food and nutrition*

Food status (e.g. high/low status foods, high/low status locations for eating) – the anthropology of food

Views and attitudes about proper nutrition

Level of knowledge

Food/nutrition seeking practices

Access barriers (availability, cost, time, preparation, location of market)

Food taboos for adolescent girls and women (portion size, speed, order of eating, food status, etc.)

Food taboos for pregnant and lactating women (change in diet, hot/cold observance, do's and don'ts)

Relationship between HIV and nutrition, including knowledge of the importance of nutrition for these conditions

- *Food insecurity*

Availability, access, utilisation

Impact on food intake and dietary diversity in adolescents

Nutrition behaviours when access is limited

- *Perception of adolescents' participation in healthy eating*

Acceptability, appropriateness, feasibility, potential

Advantages/disadvantages

Existing participation mechanisms/networks

Practical suggestions (case study, role models?)

EDUCATION

- *Perceptions about adolescent education*

Decision making and authority to act for starting/stopping school (who?)

Gender norms/Family differences in priority

Reasons for adolescent girls and boys to drop-out

Timing/frequency of drop-out

Role of teachers

Impact of menstruation on education attendance/completion

Urban/rural/pastoralist/agriculturalist/informal settlements differences?

Consequences? Alternatives?

School feeding services offered? To who? Where?

Out-of-school feeding services offered in community? To who? Where?

CHILD REARING & ADOLESCENT INFLUENCERS

- *Impact of family/peers/communal setting for raising children*

Background on family situation (raised by mother, grandmother, etc.)

Who makes decisions regarding child/adolescent care

Key adolescent behaviour influencers (both inside, e.g. siblings and outside the family, e.g. actor, singers, religious leader, teacher, politicians etc.)

Family/peers with the most impact/authority over adolescents

Importance of peers as adolescent influencers?

Other key influencers (e.g. religion)?

Aspirations for adolescents (e.g. complete school, parenthood, career, etc.)?

MESSAGING

- *Messaging channels / Access to adolescents (particularly girls 10-19 yrs.)*

Popular (in general) communication channels (e.g. TV, radio, Internet, church, community meetings, etc.)

Adolescent specific delivery mechanisms/communication channels

Best way to access the programme intended beneficiaries

Innovative/virtual methodologies (e.g., SMS, Smartphones, Facebook, etc.)?

Lessons learned, good practices, impact/outcomes achieved

Pitfalls, challenges and limitations

Adolescent groups excluded from messaging? Access barriers?

How to reach the *hardest* to reach? (e.g., girls not in school, married, working, disabled, ethnic minorities)

Case study (most impactful platform?)

RESEARCH NEEDS

- *Areas where there is lack of data / Need for more data on working with adolescents*

DHS data? Gaps? Inconsistent/confusing reporting?

Research ideas? Requests?

Location?

Target group/Age/Gender?

Theme (programmatic focus)? Programmatic challenges that require further understanding?

Neglected areas which require advocacy/increased advocacy?

- *Knowledge sharing*

How best to share data/present findings?

How best to package data? Suggestions?

IT/COMMUNICATION CONTEXT (LESSONS LEARNED & FUTURE CONSIDERATIONS)

- *Communication channels*

Urban vs. rural context

Pastoralist context vs. Agriculturalist context

Appropriate/available technologies and platforms (SMS, mHealth, radio and TV, Internet, etc.) – distinction between in-person and via remote technology

Future capabilities/New opportunities to explore

Target populations (age, gender, ethnicity, etc.)

Thematic programming (reproductive health, nutrition, family planning, etc.)]

- *Collaboration*

Partners in previous or current projects

Potential partners – suggestions

National IT, communication policy (e.g. media freedoms in general, restrictions on media, etc.)?

- *Challenges*

From previous projects/studies?

Communication projects attempted and failed (Why?) Lessons learned?

Success stories (case study)

- *Recommendations*

Appropriate/suggested methods for reaching adolescents?

Best methods to reach the hard to reach? (out of school, married, working, etc.)

- *Research*

Gaps in communication strategies? Where? Why?

Interesting/innovative topics for further investigation

CORPORATE RESPONSIBILITY (e.g. private food sector)

- Consumer research expertise (target populations?)
- Consumer related questions
- Delivery channel inventory
- Understanding local market (contextually relevant marketing needs)
- Actions private sector can take (in consideration of needs of adolescent girls?)
- Behaviour change communication (BCC) and message development
- Promotion of good nutrition / healthy cooking practices
- Collaboration/partners in industry and social accountability

DOCUMENTATION & OTHER REQUESTS

- *Documentation requests*

Do you have any project documentation you can share?

Do you have any recommendations for literature to review? Collected for this project?

- *Other organisations working with adolescents and/or nutrition (free list)*

Existing programmes on AG/nutrition?

Potential areas of collaboration

Adolescent nutrition to follow another ongoing activity, or could lead (e.g. and be followed by RSH)?

- *Potential future partnerships?*

2 – Interview guide: UN agencies, I/NGOs stakeholders and research implementation partners

DATA SHEET

- Country: _____
- Region/District/Community: _____
- Venue: _____
- Date: _____
- Name of interviewer: _____
- Name of translator (if used): _____
- Digital recording code: _____
- General comments and observations:

PARTICIPANT INFORMATION SHEET

Name/Gender	Position	Organisation/ Department	Time in service yrs and month	Type of organisation e.g. UN, INGO, NGO, CSO	Location of organisation e.g work areas

(UN) = United Nations interviews (e.g. WHO, UNICEF, UNFPA, etc.)

(INGO) = international organisational interviews

(NGO) = non-governmental and/or local civil society organisational interviews

[Interviewer will be selective about which questions to include, on the basis of the responses given by respondents. Additionally, the ordering of questions may change].

Q1 – Background

- Please describe your current position/role and responsibilities?
- In what areas of your country does your organisation operate? Who are the intended beneficiaries of your programming?
- In what ways is your organisation involved with adolescents, adolescent girls (more specifically) and/or nutrition?
- Is adolescence in your country understood as distinct time period in a person's life (e.g. childhood, adolescence, adulthood)? If so, what age range does 'adolescence' incorporate? Are any other markers of adolescence used in your country other than age (e.g. puberty, social roles, cognitive capacity, etc.)?
- Has your organisation been involved in adolescent and/or nutrition programme policy development?
- If not clear: What is your organisation's role in the adolescent strategy (or equivalent) and policy? What is your role in the nutrition strategy (or equivalent) and policy?

Q2 – Programme coordination

- Which are the main organizations involved in adolescent/nutrition programming? What do you know about the way they are coordinated? What do you think about the way they are coordinated? How are you involved in the coordination?
- How is the coordination between the government/public health sector and NGOs and civil society? (Probe: accountability of adolescent/nutrition programming)
- Are there different approaches to adolescent/nutrition programming in different parts of the country? Is there a mechanism for alignment across partners supporting adolescent/nutrition programmes that guides joint learning and action towards institutionalization? If not, how do you think this alignment can occur? What linkages can be made between community approaches and the national system?
- (UN, INGO) How is the support from the international community coordinated? (Probe: level of local ownership of programming?) (NGO) How is the support from the county/sub-county level coordinated?

Q3 – Budgeting

[Questions should reference responses on general coordination above].

- (UN, INGO) Is funding for adolescent nutrition activities available? From where? Do changes in funding vary across counties/sub-counties? Why?
- (UN, INGO) How is the budget allocated for adolescent/nutrition programmes? Will funding be sustained in the long term? Are there any relevant initiatives that are government led but donor supported?
- (UN, INGO) For donor-only supported programmes, are there plans for government to take over?
- Has public/donor funding for adolescent nutrition increased or decreased? What was the impact of this? If it has increased, do you see this as sustainable? Are there important lessons to learn from how the funding is managed?

Q4 – Programme policies and implementation

- What are the existing governmental law or policies in your country that apply to the health of adolescents? Are there any governmental policies that apply specifically to adolescent girls? What are the existing governmental policies that apply to nutrition (if different from above)?
- In your opinion, how well are the current adolescent/nutrition programmes and policies working? Do you think current legislation or policies are sufficient to ensure the nutritional needs of adolescents are being met? Why or why not? Are there gaps in the policy? Where?
- What are the broader gender laws or policies in your country? Do they cover adolescent girls? Do they cover SRH/R? How do they cover women's health, nutrition and food security?
- From a policy perspective, what are the aspirations for adolescent/nutritional programming? On which areas do you feel it should focus?

- How much scope is there for consultation from a broad range of stakeholders on adolescent/nutrition policies? (probe: from practitioners, civil society, NGOs with design expertise etc.)
- What do you think are primary problems that adolescent/nutrition programmes should address?
- What governmental ministry or department do you think is best placed to address these problems?
- In addition to these existing policies, are there any planned or forthcoming policies that would apply to adolescents and/or nutrition? (If yes, probe on when policy is forthcoming, who will be involved in producing the policy, and how will it be implemented) Was your organisation involved in creating these policies? How?
- Over the course of your career, has governmental awareness of the nutritional needs of adolescents changed? Has responsiveness to these needs changed? What, in your opinion, has led to these changes?

Q5 - Challenges

- What are the nutritional needs of adolescents (particularly adolescent girls) in the areas where your programming operates?
- What are the challenges your organisation faces in addressing the nutritional needs of adolescents (including girls)?
- If not clear: What are the biggest challenges adolescents at your programme sites face in accessing adequate nutrition? Are there known barriers for girls in particular? (Probes: early marriage, teen pregnancy, school-drop out, early entrance into labour force, etc.) Do these challenges vary depending on the location of your programming in the country? (Prompt: urban vs rural difference, variations by ethnic group, pastoralism, agriculturalist, informal settlement populations etc.)
- Do you think the government adequately protects the rights of vulnerable adolescents? How could the government do more to help support the nutritional needs of adolescent girls?
- Do you feel you know enough about the nutritional needs of adolescents in your country? If not, what additional data would you need from the communities where your organisation operates?

Q6 – Delivery platforms and communication channels

- What are the existing mechanisms/delivery platforms your organisation uses to communicate with adolescents and/or provide programming to adolescents?
- Who are the intended beneficiaries of these delivery platforms/communication channels? (Probe: school-aged children between the ages of 10-15, etc.) Differences in urban vs. rural, agriculturalist, informal settlements, pastoralist channels? Are there any gaps in the coverage of adolescents in your country using these channels?
- Are there any delivery platforms/communication channels you think should be/can be utilised in your country in order to better reach adolescents? (Probe: Internet, cell phone, etc.) In your opinion, why are these methods not being used now? What are the foreseeable challenges in using these methods?
- Are there any counter communication platforms / delivery platforms / narratives that provide harmful counter narratives? (probe: marketing strategies, religions and cultural beliefs on nutrition)
- How best to reach the hardest-to-reach adolescents? Most vulnerable girls? (Prompt: girls out of school, girls who are married, girls who are working, etc.)

Local programme implementers only (i.e. county or sub-county level stakeholders)

Q7 – Local context (food/nutrition, education, health, economics, socio-cultural, etc.)

- (INGO, NGO) Probe individually on the specific areas of operation where research is to be conducted:
In the communities where you work, what is the local food/nutritional context:
 - Foods most frequently available and most commonly consumed? Locations where they are consumed (e.g. school-feeding)? Differences by age group, ethnicity, etc.? Food taboos?
 - Food markets and restaurants (national/international, location, big/small, etc.)? Access barriers (e.g. cost, lack of constructed roads, lack of transport)?
 - Presence and effectiveness of school gardens?
 - Presence of mobile food sellers bringing items from large markets to local communities? Type and costs of selection available?
 - Impact of food insecurity of intake and dietary diversity.
- Educational context:
 - Number of schools and categorisation by age group (i.e. primary, secondary)
 - How long do girls typically stay in school (completion of primary, secondary school?) and what are the main reasons for dropping out? Different for boys?
- Health context:
 - Common concerns and health issues for adolescents, in particular adolescent girls? (Probe: teen pregnancy, HIV, early/forced marriage, anaemia, son bias when food gets scarce, if married are her husband & children prioritised when food gets scarce, etc.) Consequences?
 - Commonly experienced health problems for pregnant and lactating women? Caregivers of small children?
 - Connection between HIV and nutrition? What challenges do people living with HIV face regarding nutrition?
 - Number and type of health facilities and clinics (public, private and category level)
 - Role of health workers/Bias against providing services for underage or unmarried girls (e.g. contraceptive services)? Youth friendly?
 - Informal health services – e.g. traditional sources of care and their popularity of adolescents
- Economic context:
 - Most common source of income/employment (Adults? Adolescents)?
 - Presence of local industries for employing adolescents and young women (e.g. house girls, breweries)
- Socio-cultural characteristics and/or demographics to be aware of:
 - Presence of ethnic groups (where, unique characteristics of)
 - Presence of migrating populations (where, why)
 - Important socio-cultural norms to be aware of
 - Gender inequalities (violence, abuse, sexual, economic, psychological, cultural/social)
 - (If programme targets adolescent girls) What parameters do you use to define this group and why did you choose these?
 - How does this compare to how adolescence is defined by members of this community?
 - Alternative definitions of 'adolescence' (i.e. distinct from what was communicated above)
- Communication context:
 - Is Internet easily available, accessible and affordable?
 - Use of mobile phones (type of phone, possession of phone (mother/father/adolescents, etc.)?)
 - Other forms of non-technology communication (e.g. sports clubs, religious platforms, recreational clubs, peers, etc.)?
 - Other forms of communication technology, social media, etc. often used by adolescents

Q8 – Service providers (local)

- (INGO, NGO) Probe individually on the specific areas of operation where research is to be conducted:
Who are the main providers of adolescent/nutrition services in the counties/sub-counties/communities where you work?

- (INGO, NGO) Who are the main providers of health information in the communities where you work? (Probe: community health volunteers, public/private health facility staff, community and religious leaders, mothers/fathers, peers etc.) How do they do this?
- What nutritional services are currently provided at the community level? Do any of these services target adolescents? Adolescent girls?

Q9 – Conclusion

- Given our discussions, what do you feel has been the most important 'take away' for addressing adolescent nutrition needs, in particular the needs of adolescent girls, in your country?
- Do you have any project documentation you can share?
- Is there anything else you would like to discuss? Do you have any questions for us?
- Thank you and close

3 – Interview guide: government representative

DATA SHEET

- Country: _____
- Region/District/Community: _____
- Venue: _____
- Date: _____
- Name of interviewer: _____
- Name of translator (if used): _____
- Digital recording code: _____
- General comments and observations: _____

PARTICIPANT INFORMATION SHEET

Name/Gender	Position	Organisation/ Department	Time in service yrs and month	Type of facility e.g. gov't department, ministry	Location of facility e.g work areas

(N) = national level interviews

(P, D) = provincial/district level interviews

[Interviewer will be selective about which questions to include, on the basis of the responses given by respondents. Additionally, the ordering of questions may change].

Q1 – Background

- Please describe your current position/role and responsibilities?
- In what ways are you involved with adolescents, adolescent girls (more specifically) and/or nutrition?
- (National) Have you been involved in adolescent and/or nutrition programme policy development?
- Is adolescence in your country understood as distinct time period in a person's life (e.g. childhood, adolescence, adulthood)? If so, what age range does 'adolescence' incorporate? Are any other markers of adolescence used in your country other than age (e.g. puberty, social roles, cognitive capacity, etc.)?
- If not clear: What is your role in the adolescent strategy (or equivalent) and policy? What is your role in the nutrition strategy (or equivalent) and policy?

Q2 – Programme coordination

- Which are the main organizations involved in adolescent/nutrition programming? What do you know about the way they are coordinated? What do you think about the way they are coordinated? How are you involved in the coordination?
- How is the coordination between the government/public health sector and NGOs and civil society? (Probe: accountability of adolescent/nutrition programming)
- Are there different approaches to adolescent/nutrition programming in different parts of the country? Is there a mechanism for alignment across partners supporting adolescent/nutrition programs that guides joint learning and action towards institutionalisation? If not, how do you think this alignment can occur? (County/Sub-County level) What linkages can be made between community approaches and the national system?
- How is the support from the international community coordinated? (Probe: level of local ownership?)
- How are the approaches/programs for adolescents and gender coordinated? Is there a relationship between the two topics?

Q3 – Budgeting

[Questions should reference responses on general coordination above].

- Is funding for adolescent / nutrition activities available? From where?
- Do changes in funding vary across counties/sub-counties? Why?
- (N) How is the budget allocated for adolescent/nutrition programmes? Will funding be sustained in the long term? Are there any relevant initiatives that are government led but donor supported? (Probe: percentage of donor support and for how long?)
- For donor-only supported programmes, are there plans for government to take over?
- Has public/donor funding for adolescent nutrition increased or decreased? What was the impact of this? If it has increased, do you see this as sustainable? Are there important lessons to learn from how the funding is managed?
- How do you envisage the scale-up of adolescent/nutrition programming in the next few years? Do you have concerns?
- Are there known barriers to scaling-up and sustainability of adolescent/nutrition programmes in the country? (Probes: technical support, skills vacuum, political reticence, resourcing, accessibility, retention, coordination, training, inter-sectoral constraints (poor roads, logistics), competition for investment from other government ministries?)
- Is adolescent girls health recorded as gender budgeting?

Q4 – Programme policies and implementation

- What are the existing governmental law or policies in your country that apply to the health of adolescents? Are there any governmental policies that apply specifically to adolescent girls? What are the existing governmental policies that apply to nutrition (if different from above)?
- In your opinion, how well are the current adolescent/nutrition programmes and policies working? Do you think current legislation or policies are sufficient to ensure the nutritional needs of adolescents are being met? Why or why not? Are there gaps in the policy? Where?

- What are the broader gender laws or policies in your country? Do they cover adolescent girls? Do they cover SRH/R? How do they cover women's health, nutrition and food security?
- From a policy perspective, what are the aspirations for adolescent/nutritional programming? On which areas do you feel it should focus?
- How much scope is there for consultation from a broad range of stakeholders on adolescent/nutrition policies? (probe: from practitioners, civil society, NGOs with design expertise etc.)
- What do you think are primary problems that adolescent/nutrition programmes should address?
- What governmental ministry or department do you think is best placed to address these problems?
- In addition to these existing policies, are there any planned or forthcoming policies that would apply to adolescents and/or nutrition? (If yes, probe on when policy is forthcoming, who will be involved in producing the policy, and how will it be implemented)
- Over the course of your career, has governmental awareness of the nutritional needs of adolescents changed? Has responsiveness to these needs changed? What has led to these changes?

Q5 - Challenges

- What are the nutritional needs of adolescents (particularly adolescent girls) in your country?
- What are the challenges your country faces in addressing the nutritional needs of adolescents (including girls)?
- If not clear: What are the biggest challenges adolescents in your country face in accessing adequate nutrition? Are there known barriers for girls in particular? (Probes: early marriage, teen pregnancy, school-drop out, early entrance into labour force, etc.) If applicable, revert back to Q3 block: Are there any laws in your country that address child marriage, school attendance, child labour, etc.?
- Do you think the government of your country adequately protects the rights of vulnerable adolescents?
- How could the government do more to help support the nutritional needs of adolescent girls?
- (P,D) What local capacity is needed to address the nutritional needs of adolescents, particularly adolescent girls? (Probe: knowledge and training, partnerships, inter-governmental coordination, etc.)
- (N) What national capacity is needed to address the nutritional needs of adolescents, particularly adolescent girls? (Probe: knowledge and training, partnerships, inter-governmental coordination, etc.)
- What challenges do you face in implementing these/other changes within your role/department/ministry?

Q6 – Knowledge, training and data requests

- Do you feel you know enough about the nutritional needs of adolescents in your country?
- Do you feel you have enough training to support work on adolescent nutrition? Would you like more training or support? If so, what kind?
- Do you need additional data on the nutritional status of adolescents in your country? Adolescent girls in your country? (Probe: Is there any recently reported data such as DHS that is inconsistent or confusing are you would like additional clarity on?)

Q7 – Delivery platforms and communication channels

- What are the existing mechanisms/delivery platforms for governmental ministries to communicate with adolescents and/or provide programming to adolescents in your country?
- Who are the intended beneficiaries of these delivery platforms/communication channels? (Probe: school-aged children between the ages of 10-15, etc.) Differences in urban vs. rural, pastoralist community, agriculturalist community, informal settlement channels? Are there any gaps in the coverage of adolescents in your country using these channels?
- Who are the hardest to reach group and why?
- Are there any delivery platforms/communication channels you think should be/can be utilised in your country in order to better reach adolescents? (Probe: Internet, cell phone, etc.) In your opinion, why are these methods not being used now? What are the foreseeable challenges in using these methods?

- Are there any communication methods / delivery platforms that are currently spreading harmful messages to adolescents?

Q8 – Conclusion

- Given our discussions, what do you feel has been the most important ‘take away’ for addressing adolescent nutrition needs, in particular the needs of adolescent girls, in your country?
- Do you have any project/policy documentation you can share?
- Is there anything else you would like to discuss? Do you have any questions for us?
- Thank you and close

4 – Interview guide: representative from private sector / industry

DATA SHEET

- Country: _____
- Region/District/Community: _____
- Venue: _____
- Date: _____
- Name of interviewer: _____
- Name of translator (if used): _____
- Digital recording code: _____
- General comments and observations: _____

PARTICIPANT INFORMATION SHEET

Name/Gender	Position	Organisation/ Department	Time in service yrs and month	Type of industry e.g. food, garment, media	Location of industry e.g work areas

(FI) = food industry interviews

(MC) = media and communication industry interviews

(PC) = private clinic/private health facility interviews

[Interviewer will be selective about which questions to include, on the basis of the type of industry interviewed and responses given by respondents. Additionally, the ordering of questions may change].

Q1 – Background

- Please describe your current position in the organisation (probe: role and responsibilities?)
- In what areas of your country does your organisation operate?
- Who are the intended customers / consumers of your product or service?
- If not clear: in what ways is your organisation involved with adolescents, adolescent girls (more specifically) and / or nutrition? (i.e. customers, consumers, aim of organisation etc.)
- Is adolescence in your country understood as distinct time period in a person's life (e.g. childhood, adolescence, adulthood)? If so, what age range does 'adolescence' incorporate? Are any other markers of adolescence used in your country other than age (e.g. puberty, social roles, cognitive capacity etc.)?
- Has your company / organisation been involved the development of products, programmes, activities or services for adolescent girls?
- Would you like for your industry / company / organisation to be engaging with adolescent customers / consumers more? And why? How do you envision your organisation to contribute to the nutrition sector / work with adolescents in the future?

Q2 – Lay of the land: competition and coordination

- Which are the main organizations involved in adolescent nutrition or adolescent specific communication services your country? Do you work together with these organisations or do you compete against them? Who are your main competitors in market segment / space?
- Is there a mechanism for alignment across industry partners providing adolescent specific communication products / services / nutrition products / nutrition related services that guide institutionalization? If not – could this be useful for your industry?
- What linkages can be made between industries such as yours and adolescent/nutrition programming of INGOs / UN agencies? Are there any existing mechanisms, platforms, or meetings that private industries can use to communicate with the government, health sector and INGOs? Is there a need for such mechanisms?
- Are there any foreseeable corporate / political / practical barriers in your country that might prevent your industry's involvement in the adolescent engagement / nutrition space? (Probes: technical support, skills vacuum, political reticence, resourcing, accessibility, retention, coordination, training, inter-sectoral constraints (poor roads, logistics), competition for investment from other industries, prize of goods, import barriers, unfair competition through subsidies etc.). Can you recommend any solutions to address these barriers?

Q3 – Enabling business environment

- How is the coordination between the government and private industries in your country when it comes to adolescent engagement and / or nutrition?
- Are there any existing governmental law, regulations or policies in your country that impact your industry and would apply to the health of adolescents? (Prompt: (FI) labour standards, food standards, food subsidies, unfair competition structures (i.e. monopolies on specific type of food) (CI) communication policies, public TV licencing fees, costs of airplay; restrictions to broadcasting etc.)
- In your opinion, how well are these laws or policies working? Are they written, but not implemented or enforced? Are there 'unwritten' laws that *are* implemented or enforced? Do you think current legislation or policies are sufficient to ensure the effective working of industry partners? Why or why not? Are there gaps in the policy or practice? Where?

Q4 - Market behaviour

[Questions should reference responses on section Q3 above]

- Are people willing to pay for the service you offer? And who pays for which service / good? How is the market behaviour of adolescents and their caregivers in [enter name country]? Can you give an example of when you changed your strategy / product / service and the positive / negative this had on the purchasing behaviour of your customer / consumers?
- [If main focus is not on adolescent nutrition / adolescent communication strategies / platforms] Is part of your budget dedicated for adolescent nutrition activities and/or adolescent communications strategies? From where? Are there any relevant initiatives that are supported by your industry?
- How do you envisage the scale-up of adolescent/nutrition programming can occur within your industry in the next few years? Do you have concerns?
- Do you think it is profitable to invest in adolescent nutrition / adolescent specific communication activities / target the adolescent segment of the market? And why?

Q5 – Corporate responsibility

- Is there a push for Corporate Social Responsibility (CSR) projects / activities in your sector?
- (FI) What do you think is/can be the role of your industry in providing good nutrition for adolescents? (Prompt: fortification, marketing and nutrition education, vitamin and mineral supplements, healthy cooking demonstrations, etc.) Do you think that improving adolescent nutrition, particularly the nutrition of adolescent girls, will be beneficial to your industry? How so? (Prompt: increased worker productivity, increasing market for (other) goods, etc.)
- (MC) What do you think is/can be the role of your industry in communicating with adolescents on their health, well-being and nutritional needs? (Prompt: media savvy age groups, proponents for family/community change, etc.) Can your industry suggest any innovative communication strategies?
- (PC) What do you think is the role of the private health industry in providing for the health and nutritional needs of adolescents? What services, if any, do you provide for adolescents that you think are better utilised than publicly offered services? (Prompt: family planning and contraceptive methods, etc.) Why do you think adolescents prefer private health clinics over public institutions for these services?
- Has your industry made any commitments to developing policies that integrate responsible adolescent/nutrition practices into daily business operations? Has your industry made any commitments to report on progress made toward implementing these policies?

Q6 – Consumer insight and data requests

- From your experience which marketing strategies work to engage adolescents? And what does not? Is there a difference as to what works for girls / boys? Or to target adults (parents, teachers) buying for adolescents? And what kind of insights can you share for what works for reaching the most vulnerable girls?
- What kind of contextually relevant insight into marketing/understanding of local market in your country can you share? (Prompt: differences between urban vs rural, agriculturalist, informal settlement, pastoralist populations, adolescent consumer preferences, etc.)
- Do you have any consumer research or market data related to adolescents/nutrition in your country that you can share?
- Do you feel you know enough about the nutritional needs and desires of adolescents in your country? And how does this knowledge help you sell your product / service? How do you think knowledge about adolescent girls' desires / needs help you sell your product?
- Do you need additional data on the nutritional status of adolescents in your country? Adolescent girls in your country? (Probe: Is there any recently reported data such as DHS that is inconsistent or confusing are you would like additional clarity on?)

Q7 – Delivery platforms and communication channels

- How do you market your goods (FI) / the goods that you are to market (MC)? What works to reach adolescent girls and what not?
- What are the existing mechanisms/delivery platforms for your industry to communicate with adolescents in your country? (Elicit inventory of delivery channels and the aim / objective of these channels, who they consider the hardest group to reach)
- Who are the intended beneficiaries of these delivery platforms/communication channels? Differences in channels for urban vs. rural, pastoralist, agriculturalist, informal settlement populations? Are there any gaps in the coverage of adolescents in your country using these channels?
- (FI) Does your industry have any experience in behaviour change communication (BCC) and message development in order to mobilise change? (Prompt: promotion of good nutrition and nutritious cooking practices, purchasing power and persuasion of market behaviour of adults / adolescents etc.)
- Are there any delivery platforms/communication channels you think your industry can use in order to better reach adolescents? (Probe: Internet, cell phone, events in schools, sport clubs etc.) In your opinion, why are these methods not being used now? What are the foreseeable challenges in using these methods?

Q8 – Conclusion

- If not asked previously: Do you have any project documentation you can share? Consumer research?
- Is there anything else you would like to discuss? Do you have any questions for us?
- Thank you and close

5 – Focus group discussion/interview guide: community leaders, members and caregivers

DATA SHEET

- Country: _____
- Region/District/Community: _____
- Venue: _____
- Date: _____
- Name of interviewer: _____
- Name of translator (if used): _____
- Digital recording code: _____
- General comments and observations: _____

(include characteristics of commune/village; may also include general impressions of nutritional status, or overall health of participants, e.g., weight to height ratio, etc. or any particular water, hygiene, sanitation observations)

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PARTICIPANT INFORMATION SHEET Focus group discussion guide – Demographic information

Gender	Age	Years of education	Role in community e.g. leader, member	How elected or recruited (community leaders)

Demographic Information

- Gender
- Age
- Marital status
- Religion
- Ethnicity
- Occupation
- Years of education (primary, secondary, etc.)
- Children? Number of children in care? Age and gender of children?
- Family setting/home life (i.e. number and type of persons in household)
- General income range/How do you make your living

[Interviewer will be selective about which questions to include, on the basis of the responses given by respondents. Additionally, the ordering of questions may change. Interviewees will be asked to specifically consider the adolescents in their own community/population when answering the questions].

(CL) = community leader interviews (community leader, women’s leader, religious leader, etc.)

(CM) = community member interviews

(CG) = caregiver interviews (persons currently caring for/living with adolescents)

Q1 – Background

- Please introduce yourself and describe your role in the community.
- Do you have a role with regard the health or well-being of the members of your community? How?
- In what ways are you involved with adolescents, adolescent girls (more specifically) and/or nutrition?
- Is adolescence in your country understood as distinct time period in a person's life (e.g. childhood, adolescence, adulthood)?
- How would you define adolescence in your community? (probe: what age range does 'adolescence' incorporate? Are any other markers of adolescence used in your community other than age such as puberty, social roles, cognitive capacity, etc.)
- Do you think the way you define adolescence and the way NGOs/government defines adolescence are similar? Different? Why or why not? If there is a mismatch, are there any consequences to this?

Q2 – Programme coordination and implementation (CL)

- Which are the main organizations / stakeholders involved in adolescent/nutrition programming in your community? What do you know about the way they are coordinated? What do you think about the way they are coordinated? How are you involved in the coordination?
- In your opinion, how well are the current adolescent/nutrition programmes working?
- How much scope is there for community consultation with adolescent/nutrition programme implementers? (probe: from practitioners, civil society, NGOs, etc.) How do you think you could be better included in consultations with programme implementers?
- What do you think are primary problems that adolescent/nutrition programmes should address? Are these problems currently being addressed in your community? Why or why not?

Q3 – Anthropology of Food

- Economics/livelihoods:
 - Who is responsible to provide food for the family? How? Who pays?
 - What economic activities are involved in providing money to pay for food?
 - Does household grow/harvest their own food? What?
- Social norms:
 - Who is responsible for shopping at the market? Selecting/purchasing food?
 - Cooking/preparing responsibilities?
 - How many meals eaten per day? What time? Snacking in between meals? What snacks (packaged foods, etc)?
- Cultural influences:
 - How is food divided in the household?
 - Who eats and when? (e.g. social hierarchy in the household)
 - How are portions determined?
 - Differences in types of food consumed according to age, gender, etc.?
- Locally available food/markets:
 - Normal food stuffs – essential food (e.g., rice eaten every day?)
 - Particular food stuffs for different consumers (gender / age components etc)?
 - Special food for occasions? What kind of food? What type of occasion?
 - Favourite foods, things considered 'treats'?

Q4 – Food & Nutrition

Part A: Socio-cultural norms and food taboos (women and adolescent girls)

- Are there any socio-cultural norms that apply only to girls or women regarding the harvesting, preparation or consumption of food? Who is responsible for food preparation? At which age? Any foods forbidden to girls or women? Why?

- Are there any specific food taboos or familial conventions that girls must follow? (Prompt: eating last, receiving smallest portion of family food, etc.) Why?
- Are there any specific food taboos or socio-cultural conventions that pregnant and lactating women must follow? (Prompt: forbidden/must have foods during pregnancy or while breastfeeding, hot/cold food consumption requirements, need to eat food at a certain pace or at a specific time of day, any other noticeable/preferred changes in diet during this period, etc.) Why?
- Do you see this as different from the needs of boys and men? What are the nutritional needs of adolescent girls and women of childbearing age in your community? Why or why not? Does this change when adolescents get older?
- If not clear: What are the biggest challenges girls and women in your community face in accessing adequate nutrition? (Probes: early marriage, teen pregnancy, school-drop out, HIV, early entrance into labour force, food insecurity, son-bias if resources are scarce etc.)

Part B: Definitions and barriers/access (good food, bad food, healthy food, not healthy food)

- What is nutrition for adolescents? What does it mean for an adolescent to have adequate nutrition? Is this different for girls and boys? What would this consist of the daily diet of an adolescent? Do adolescent girls eat differently than adolescent boys?
- Do you think adolescents in your community receive adequate nutrition? Why or why not? Are there any groups of adolescents in your community that struggle more than others to receive adequate nutrition? Why?
- What is the typical diet of an adolescent in your community? What would they typically eat/have access to in a normal day? Do adolescent girls eat differently than adolescent boys?
- Are there any **access barriers** in your community that prevent adolescents, and their families, from receiving adequate nutrition? (Prompt: cost, time, preparation, location of market) Any barriers faced by adolescent girls in particular (prompt: What if resources are scarce? Is there a son-bias)?
- What do you think is the most significant challenge in this community preventing adolescents from receiving adequate nutrition? Adolescent girls?
- What would make it easier for adolescents in your community to receive adequate nutrition? What would help them most to have access to nutritious food?

Q5 – Education

- Are children in this community typically in school? Is there a certain age at which children/adolescents in this community stop going to school? Does this general trend differ from boys to girls? Why?
- Do you think there are any differences in family priorities over girls' vs boys receiving an education? Why or why not?
- Who in the family/community typically makes the decision for children to go to school? Who typically makes the decision for children/adolescents to stop going to school?
- What, if any, are the consequences for adolescent girls dropping out of school? Are there any socio-cultural consequences for girls staying in school (e.g. not preferred for marriage)?
- What are the main challenges adolescent girls in your community face in receiving an education? (Prompt: teen pregnancy, entering the workforce, etc.)
- What would make it easier for adolescents, particularly adolescent girls, in your community to continue their education (i.e. not drop out)? What help would they need to stay in school? (Probe: Access/effectiveness of current initiatives, e.g. school meals, school gardens)

Q6 – Sexual, reproductive & maternal health issues

- At what age do girls/women normally get pregnant in your community? (if at an early age) Is this considered a problem? Why?
- What are the primary sexual, reproductive and maternal health issues girls and young women in your community face? (Prompt: teen pregnancy, access to family planning, gender-based violence, etc.) Do you see these challenges as having increase/decreased in recent years? Why or why not?

- When adolescent girls in your community are in need of health services (cite above responses) whose advice do they usually seek? (For minor and major health issues) Who, if anyone, would they normally seek out for health services? (Prompt: public/private clinic, social workers, traditional or spiritual healer, etc.)
- Are there some provider's/places adolescent girls don't want to go for healthcare? Why? Consequently, are there some provider's/places adolescent girls would prefer to go to for healthcare? Why?
- What do you think is the most significant challenge girls and young women in your community experience with regards to access to sexual, reproductive and maternal health services?
- If unclear: Do you think these challenges are faced by adolescent girls and young women in particular? Are these challenges faced more frequently by younger girls and women rather than older women or others in your community? Why? (Prompt: bias against providing health services to adolescent girls or unmarried women, e.g. contraceptives, etc.)
- What do you think are the consequences for adolescent girls in particular when they do not have access to these services? (Prompt: school drop-out, maternal morbidity and mortality, adverse child health outcomes, etc.)
- What would make it easier for adolescent girls in your community to use community health services (i.e. sexual, reproductive and maternal health services)? What would help adolescent girls to start or continue using these services?
- What connection is there between HIV and nutrition? How important is nutrition for people living with HIV? What challenges do people living with HIV face regarding nutrition?

Q7 – Child rearing & adolescent Influencers

- Within your community, who typically raises children?
- What influence do you have over adolescents in your community?
- Who in the community or family has the most control over adolescent behaviour? Who in the community or family typically makes decisions on behalf of adolescents? How long does this period generally last? Does this responsibility shift/change over time (e.g. as adolescents grow older is community/family influence lessened? when girls and boys enter the workforce? when girls marry)?
- Who in the community or family do you think has the most influence over adolescent behaviour? (e.g. mother and father, grandparent, community leader(s), older peers, older siblings, other adolescents (boys? girls?), etc.)?
- If unclear: Who has the most authority over adolescents in your community? Is this the same for adolescent girls specifically? Does authority lessen as adolescents get older? Do key influencers of adolescent behaviour change from family to peers?
- Where do you think adolescent girls receive most of their information from regarding food and nutrition, education, and health services? Who gives them advice? Who communicates with them on a regular basis? How good/useful do you think these messages are?
- Who/what do you think is the most reliable source of information to adolescents? Adolescent girls?

Q8 – Knowledge and data requests

- Do you feel you know enough about the nutritional needs of adolescents in your community, particularly the needs of adolescent girls?
- Do you need additional data on the nutritional status of adolescents in your community? Adolescent girls in your community? What kind of information would you like to have?

Q9 – Delivery platforms and communication channels

- How do you receive information? Share with others?
- How do adolescents receive information? What are the best methods of communicating with adolescents?
- How do you communicate with adolescents in your community? Or with your own son/daughter? How do leaders in this community communicate with adolescents?

- What are the existing mechanisms/delivery platforms for the government and/or NGOs to communicate with adolescents and/or provide programming to adolescents in your community?
- Who are the intended beneficiaries of these delivery platforms/communication channels? (Probe: school-aged children between the ages of 10-15, etc.)
- Are there any gaps in the coverage of adolescents in your community using these channels? (e.g. not reaching out-of-school children?) What groups do you think are being excluded? Do you have any suggestions for how these groups can be better included?
- How much (if at all) do these mechanisms/channels of information influence adolescent decisions/practice?
- Are there any delivery platforms/communication channels you think should be/can be utilised in your country in order to better reach adolescents? (Probe: Internet, cell phone, community based strategies such as local groups or sports clubs, etc.) Are there any foreseeable challenges in using these methods?

Q10 – Conclusion

- Given our discussions, what do you feel has been the most important ‘take away’ for addressing adolescent nutrition needs, in particular the needs of adolescent girls, in your community?
- Do you have any documents you would like to share?
- Is there anything else you would like to discuss? Do you have any questions for us?
- Thank you and close

6 – Technology survey

Target number of interviewees (per community): 20 (10 girls/young women, 10 boys/young men)
Target age group: Adolescents and youth aged 10-25 yrs

Demographic information

Gender: *Male, Female* [Circle]

Age:

Marital status: *Married, Single, Divorced, Widowed* [Circle]

Children: *Yes, No* [Circle]

Number of children:

Age of children:

Gender of children:

Family setting/home life (i.e. number and type of persons in household):

General income range/How do you make a living:

Ethnicity:

Occupation:

Years of education:

Religion:

Location/Village Name:

Q1 – Radio

- Do you listen to the radio? *Yes, No* [If no, ask follow-up on ‘why’ then skip to Question 2]
If No – Why not?
- How do you listen (e.g. alone, with parents, with friends)?
- Where do you listen (e.g. at home, on the bus)?
- How often? *Less than once a week, Once a week, Every day* [Circle]
- What radio station(s) do you listen to most often?
- What type of radio programme do you like the most?
Why?
- What types of radio programme do you like the least?
Why?
- When do you usually listen to the radio (e.g. day, time)?
- On average, how many hours per day/week do you listen to the radio?

Q2 - Television

- Do you watch television? *Yes, No* [If no, ask follow-up on ‘why’ then skip to Question 3]
If No – Why not?
- How do you watch television (e.g. alone, with parents, with friends)?
- Where do you watch television (e.g. at home, at an Internet café, other social setting)?
- How often? *Less than once a week, Once a week, Every day* [Circle]
- What television channel(s) do you watch most often?
- What type of TV programme do you like the most?
Why?
- What type of TV programme do you like the least?
Why?
- When do you usually watch TV (e.g. day, time)?
- On average, how many hours per day/week do you watch television?
- What about television advertisements – are there any commercials that you particularly like?
Why?

Q3 - Internet

- a. Do you connect / use the Internet? *Yes, No* [If no, ask follow-up on 'why' then skip to Question 4]
If No – Why not?
- b. How do you connect to the Internet (via computer, phone, Internet café, school)?
- c. How often? *Less than once a week, Once a week, Every day* [Circle]
- d. For what purpose do you use the Internet?
- e. Which websites do you like to visit?
Why?
- f. When do you usually use the Internet (e.g. day, time)?
- g. Where do you usually use the Internet (e.g. location)?
- h. Do you use the computer alone or with others?
- i. On average, how many hours per day do you use the Internet?
- j. Is your internet usage supervised by your parents or others? *Yes, No* [Circle]

Q4 – Mobile phone

- a. Do you have access to a mobile phone for your use (stress that this can be a co-used phone)? *Yes, No*
[If no, skip to Question 5]
- b. How often is this phone charged/functional? *Not at all, Less than once week, Once week, Every day*
[Circle]
- c. Is this phone capable of sending and receiving phone calls? *Yes, No* [Circle]
- d. Does the phone currently have credit and able to make a call? *Yes, No* [Circle]
- e. Do you make or receive calls? *Yes, No* [Circle]
- f. Who do you frequently call or receive calls from?
- g. Is this phone capable of sending and receiving text messages? *Yes, No* [Circle]
- h. Can you read text messages from the phone? *Yes, No* [Circle]
- i. Do you make or receive text messages? *Yes, No* [Circle]
- j. Who do you frequently text or receive texts from?
- k. How is the network reception in your area? *No reception, Not very good, Good, Excellent* [Circle]
- l. Can you make or receive a phone call using this phone from inside your home? *Yes, No* [Circle]
- m. Is there another location where cell reception is good/better than within your home? Where?
- n. What phone company provides service for this phone?
- o. Do you use the phone to connect to the Internet? *Yes, No* [Circle]

Q5. Social networks – mobile phone

- a. Do you know of anyone who has a mobile phone? *Yes, No* [If no, skip to Question 6]
- b. Could you list the persons who you are closest to (up to 5) who have a mobile phone and tell me how you are related to them [husband, mother-in-law, friend, etc.]?
- c. Under what circumstance would you go to these persons to borrow their phone (e.g. If your phone was out of order...?)

First name/initials*	Relationship	Borrow phone?				
a _____	_____	f	Never	Emergency	Occasionally	Anytime
b _____	_____	g	Never	Emergency	Occasionally	Anytime
c _____	_____	h	Never	Emergency	Occasionally	Anytime
d _____	_____	i	Never	Emergency	Occasionally	Anytime
e _____	_____	j	Never	Emergency	Occasionally	Anytime

Please describe the relationship ties between persons listed above. Note: The grid will only be filled completely if interviewee listed 5 names. [VC = very close; C = close; NVC = not very close/strangers]

	Relationship 5b	Relationship 5c	Relationship 5d	Relationship 5e
Relationship 5a				
	Relationship 5b			
		Relationship 5c		
			Relationship 5d	

Q6 – Social media

- a. Do you use social media? Yes, No [If no, skip to Question 8]
- b. What sites / platforms do you use?
- c. Which ones do you like to use the most? [List up to 3]
 - Site / Platform 1:** Why do you like this platform?
 - Site/ Platform 2:** Why do you like this platform?
 - Site / Platform 3:** Why do you like this platform?
- d. Which platform do most of your peers/friends use?

-----[Taking each site or platform in turn: **Platform 1**]-----

- e. How often do use that site / platform? *Less than once week, Once week, Every day* [Circle]
- f. How do you connect to that site / platform (e.g. by phone / laptop / shared computer etc.)?
- g. What do you use that site / platform for (e.g. chat, get news, share photos, etc.)?
- h. Who do you communicate with on this site / platform?
- i. What type of posts do you like?
- j. Approximately how many connections do you have on that site / platform?
- k. Do you trust that site / platform?
- l. Have you ever experienced difficulties (e.g. misinformation, cyber bullying, etc.) through that site?
- m. Who (if anyone) supervises your online interactions?

-----[Taking each site or platform in turn: **Platform 2**]-----

- e. How often do use that site / platform? *Less than once week, Once week, Every day* [Circle]
- f. How do you connect to that site / platform (e.g. by phone / laptop / shared computer etc.)?
- g. What do you use that site / platform for (e.g. chat, get news, share photos, etc.)?
- h. Who do you communicate with on this site / platform?
- i. What type of posts do you like?
- j. Approximately how many connections do you have on that site / platform?
- k. Do you trust that site / platform?
- l. Have you ever experienced difficulties (e.g. misinformation, cyber bullying, etc.) through that site?
- m. Who (if anyone) supervises your online interactions?

-----[Taking each site or platform in turn: **Platform 3**]-----

- e. How often do use that site / platform? *Less than once week, Once week, Every day* [Circle]
- f. How do you connect to that site / platform (e.g. by phone / laptop / shared computer etc.)?
- g. What do you use that site / platform for (e.g. chat, get news, share photos, etc.)?
- h. Who do you communicate with on this site / platform?
- i. What type of posts do you like?
- j. Approximately how many connections do you have on that site / platform?
- k. Do you trust that site / platform?
- l. Have you ever experienced difficulties (e.g. misinformation, cyber bullying, etc.) through that site?
- m. Who (if anyone) supervises your online interactions?

Q7 – Social networks – social media

- a. Could you list the persons who you are closest to on social media and tell me how you are related to them [husband, mother-in-law, friend, etc.]?
- b. What social media platform do you connect with them on?

First name/initials*	Relationship	Social media?
a _____	_____	f _____
b _____	_____	g _____
c _____	_____	h _____
d _____	_____	i _____
e _____	_____	j _____

Please describe the relationship ties between persons listed above. Note: The grid will only be filled completely if interviewee listed 5 names. [VC = very close; C = close; NVC = not very close/strangers]

	Relationship 7b	Relationship 7c	Relationship 7d	Relationship 7e
Relationship 7a				
	Relationship 7b			
		Relationship 7c		
			Relationship 7d	

Q8. Other communication channels

- a. Do you use any communication channels that are not online / accessible via technology? (e.g. youth clubs, sports, etc.)? *Yes, No* [Circle]
- b. What channels do you use? [List up to 5]
 - 1.
 - 2.
 - 3.
 - 4.
 - 5.
- c. What channel do you use most often?
- d. How often do use this channel? *Less than once week, Once week, Every day* [Circle]
- e. Which channels communication channels do you prefer?
 - Why?

**Only record first name or initials. Names will not be used in data analysis or the final report.*

7 – Adolescent workshop: 10-14 years old

[Age and gender segregated groups. Activities can be modified based on the type of delivery platform].

Target adolescent girl (aged 10-14 yrs) group size: 8-10

Target adolescent boy (aged 10-14 yrs) group size: 8-10

Time estimation: 2.5 hours

Introduction (10mins)

- Thank participants for taking part.
- Explanation of study: specific, visual, simplified and contextually relevant.
- Clearly present information about the purpose of the session and how information generated will be used.
- Introduce confidentiality, anonymity, no right or wrong answer, free to stop interview/withdraw participation at any time with no negative consequences.
- Setting ground rules/ group contract to discuss the importance of confidentiality and ensure participants keep each other's opinions and experiences confidential.

A day in the life of...timeline (20-30mins)

- Purpose of the activity/objectives (a day during the week? on the weekend?)
- Distribution of paper and drawing materials/drawing horizontal timeline
- Questions to prompt timeline:
 - When do you wake up? Go to sleep?
 - When eat? Where? What?
 - Experiences/sources of food
 - What is good food? What is bad food? What makes food easy for you to get to? What makes it or hard for to get to?
 - Any time spent doing other 'typical activities' (food preparation, etc.)
 - What kind of household, agricultural or work responsibilities do you have and where?
 - What time do you spend at school or studying? If not in school, what normal activity during day?
 - Any time spent caring for children/receiving care from others?
- Discussion of drawings/timelines (Have the group reflect on each others timelines...)
- Discussion: Day to day decision making exercise. Which decisions adolescents can make themselves and which they cannot? And why? *Probe food choices*

From childhood to adolescence to adulthood (30mins)

- Provide a vignette about adolescent nutrition / adolescence to inspire the participants to talk about their own lives...
- Distribution of paper and drawing materials/drawing childhood, adolescence and adulthood
 - Thoughts about being an 'adolescent'...what does this mean to you? To your family/community?
 - How do you know when someone is a child? Draw.
 - How do you know when someone becomes an adult? (prompt: physical, social, cultural, psych markers, etc.) Draw.
 - Where do you see yourselves? In one of these categories? Is there an in-between? If so, can you draw the in-between?
- Discussion: Where does your family/community see you as (child, adolescent, adult, etc)? Government? Why? Do you agree with this assessment? Why or why not?
- Discussion: What barriers/challenges do you face as an adolescent (e.g. work, education, etc.)?
- Discussion: Aspirations. Who do adolescents look up to and where do they envision themselves in a couple of years / when they are adults?
 - Draw where you will be having dinner in 10 years? What will you eat and with whom?

FOOD/REFRESHMENT BREAK (10mins)

Social network mapping and communications channels (50-60mins)

Objective: to find out where adolescents go to gather information on topics important to them: who do they communicate, where, why and how often?

Materials needed:

- Big sheets of paper (A1)
- A4 papers
- Coloured pens and pencils

Instructions:

- *Step 1:* Ask participants to draw an image of themselves in the middle of a large A1 paper. They can use coloured pens and papers. Ask them to draw a circle around the image they drew.
- *Step 2:* Ask the participants to draw four more circles (See Image 1). Ask the participants to draw or free list the people they spend time with on a separate piece of A4 paper.
- *Step 3:* Ask the participants to categorize the people they free listed on the big A1 paper - those they “spend much time with most” in the circle directly around them and those with “whom they spend less time” further away from their own image.
- *Step 4:* Ask the participants to draw or list per person that they drew on the A1 paper “how they communicate” – i.e. per phone, online on social networks, in person – and “where they meet typically” – i.e. in the sport club, at school, at home, in church, study groups, cultural ceremonies etc.
- *Step 5:* Ask the participants to put a star (*) next to the people they ask for advice or places (**) where they look for information / go to learn. Which relationships are positive (enabling) and which ones may be more challenging (e.g. teachers)?
- *Step 6:* Discussion on preferred communication methods and information resources:
 - Where do you look for information on topics important to you? (probe: conversations with friends, websites, television series, radio, parents, teachers?)
 - Whose opinion do you trust? (probe: teacher, friends, older sister, radio presenter?) And how do you prefer to communicate with this person / how do you access this source?
 - Are there certain topics that you can't discuss with people you trust? (probe: what do you do if you can't go to these people for advice?)
 - Are there specific groups / platforms that you access / go to, to learn about topics important to you (probe: Meetings with friends? Specific classes / teachers?)
 - Do you also look on social media / websites for advice? (if yes – please continue with the below questions – if not, please proceed to step 7)
 - What sites / platforms do you use? Which ones do you like to use most and why? Which platforms do most of your peers' use?
 - How do you connect to that site / platform (e.g. by phone / laptop / shared computer etc.)? What do you use that site / platform for (e.g. to chat, get news, share photos, find friends etc.)?
 - What type of posts do you like and why?
 - Do you trust that site / platform? Have you ever experienced any difficulties (e.g. misinformation, cyber bullying etc.) through that site / platform?
 - Who supervises your online interactions?

- *Step 7:* Thank the participants for their work and tell them what you will do with the gathered data (i.e. write a report for WFP on preferred communication mechanisms for the design of their future nutrition programmes; make sure to state that it will be treated confidential, anonymous etc.)

Conclusion (10-20mins)

- Questions and discussion
 - Eliciting ideas about priority areas for adolescents in their village? (education, sexual health, gender-based violence, child marriage, etc.)
 - Story of most significant challenge (elicit narrative)
 - Thoughts about adolescent nutrition
 - Barriers to adequate nutrition
- Suggestions/recommendations for communication channels to reach adolescents
- Any other points to add...
- Thank you and close

8 – Adolescent workshop: 15-19 years old

[Age and gender segregated groups. Activities will be modified based on the type of delivery platform].

Target adolescent girl (aged 15-19) group size: 8-10

Target adolescent boy (aged 15-19) group size: 8-10

Time estimation: 4 hours

Introduction (10mins)

- Thank participants for taking part.
- Explanation of study: specific, visual, simplified and contextually relevant.
- Clearly present information about the purpose of the session and how information generated will be used.
- Introduce confidentiality, anonymity, no right or wrong answer, free to stop interview/withdraw participation at any time with no negative consequences.
- Setting ground rules/ group contract to discuss the importance of confidentiality and ensure participants keep each other's opinions and experiences confidential.

A day in the life of...timeline (30mins)

- Purpose of the activity/objectives (a day during the week? on the weekend?)
- Distribution of paper and drawing materials/drawing horizontal timeline. Alternately, can use one large roll of paper that everyone writes on.
- Questions to prompt timeline:
 - When do you wake up? Go to sleep?
 - When eat? Where? What?
 - Experiences/sources of food
 - What is good food? What is bad food? What makes food easy for you to get to? What makes it or hard for to get to?
 - Any time spent doing other 'typical activities' (food preparation, etc.)
 - What kind of household, agricultural or work responsibilities do you have and where?
 - What time do you spend at school or studying? If not in school, what normal activity during day?
 - Any time spent caring for children/receiving care from others?
- Discussion of drawings/timelines (Have the group reflect on each others timelines...)
- Discussion: Day to day decision making exercise. Which decisions adolescents can make for themselves regarding daily activities and which they cannot? And why? *Probe food choices*
- Discussion: Thoughts about being an 'adolescent'...what does this mean to you? To your family/community?
- Where does your family/community see you as (child, adolescent, adult, etc)? Government? Why? Do you agree with this assessment? Why or why not?
- What barriers/challenges do you face as an adolescent (e.g. work, education, etc.)? What are the barriers/challenges as related to food and nutrition?
- Discussion: Aspirations. Who do adolescents look up to and where do they envision themselves in a couple of years / when they are adults?
- [Time dependent] Distribute individual large pieces of paper. Select one activity from the timeline (e.g. dinner time) and ask participants what this scene will be like in 10 years time (e.g. draw where you will be having dinner in 10 years? What will you eat and with whom?)

Social network mapping and communications channels (30mins)

[See above for additional details].

[Use of photography will be assessed by the investigator on a case-by-case basis depending on its appropriateness & feasibility]

Graffiti wall/Photo elicitation explanation (30 minutes)

Distribute materials – pencils, paint, large sheets of paper and polaroid cameras, if relevant

- Agree the objectives of use of the graffiti wall and/or photography to “tell a story”
- Generation of questions (from adolescents) to guide according to objectives
- If relevant, discuss safety, authority and responsibility of using a camera
- If relevant, discuss acceptable ways to approach others to take their picture
- Question/answer session

Selection and discussion of 2 themes (modified depending on adolescent responses to above)

- Example theme 1: ‘Good Food, Bad Food’ (e.g. trip to the market, food preferences)
- Example theme 2: ‘Food for Girls’ (e.g. food consumption behaviour)
- Example theme 3: ‘Communication channels’ (e.g. meeting spaces, village activities, technology hubs)

Graffiti wall activity/guided “photo walk” through community (90mins)

FOOD/REFRESHMENT BREAK (10mins)

Elicitation (60 mins)

[If relevant, number Polaroid photos on table; code and organise per participant SHOWeD method].³⁶

Steps in Elicitation	
Step	Description
1	Ask participants to write a 1-2 word caption/give a title to their images on the wall or the photos (write on the white space at bottom of Polaroid image).
2	Ask participants to select 1-3 images or photos they feel are most significant.
3	Ask participants to describe what is in that image or photo and where it was taken, and a rationale for why this was included in the data set. Participants present some of their images or photos to the group, ask questions of each other, and discuss the photographs as a whole. Discussion should be audio recorded. <ul style="list-style-type: none"> - What do you See here? - What’s really Happening here? - How does this relate to Our lives? - Why does this situation exist? - What can we Do about it?
4	As a group, identify the themes of the activity based on collection of images on the wall.

Conclusion (10-20mins)

- Questions and discussion
 - Eliciting ideas about priority areas for adolescents in their village? (education, sexual health, gender-based violence, child marriage, etc.)
 - Story of most significant challenge (elicit narrative)
 - Thoughts about adolescent nutrition
 - Barriers to adequate nutrition
- Suggestions/recommendations for communication channels to reach adolescents
- Any other points to add...
- Thank you and close

³⁶<http://www.mapc.org/sites/default/files/Photovoice%20Facilitators%20Guide%20with%20Resources.pdf>

Annex 6 – Consent forms

Informed consent (18+ years) national, county, sub-county level stakeholders

Formative Research for Adolescent Nutrition Programming in Kenya

Background to the study

The education, health, social and economic needs of adolescent girls are increasingly recognized as areas that deserve focused attention and resources. There is however, a lack of evidence to guide the development of strategic nutritional messages and interventions for this specific target groups. The Global Goal 'Zero Hunger' established a critical window of action and unique opportunity for the World Food Programme (WFP) to play a leadership role and highlight the different entry points to better address the needs of this important target group and achieve long-term impact at scale.

Objective of the study

Gaining an understanding of how to effectively reach adolescents is an essential starting point for assessing how nutrition specific and nutrition sensitive interventions can be delivered and best related to other components of the 'adolescence equation' including, for example, reproductive health care and livelihood skills. The objective of this study is to learn from INGO stakeholders, the private sector, relevant government ministries (e.g. Ministry of Health, Ministry of Education), adolescents and their caregivers about adolescent nutrition needs in Kenya and how we can better communicate with this age group to improve their nutritional status and help them to lead healthier lives.

Interview/Focus Groups/Adolescent Workshops

For this purpose, Primary Investigator (PI) would like to talk to you about matters relating to adolescent nutrition. Informal interviews and focus group discussions will last for approximately one hour to one hour and a half. Your participation in this research is voluntary. You have the right to withdraw from the discussion at any time without reason and without penalty. There is no cost associated with your participation. We believe there is no risk to you although it is noted that there may be aspects of your participation in this research that involve risks which are currently unforeseeable.

We will ensure that your information, opinions and experiences are kept confidential and will only be used for the purpose of the study outlined. We will not use your name. You may ask any questions related to the study and we will answer these questions to your satisfaction.

With your permission, we may make an audio recording of our discussions for our records. This will be destroyed at the end of the study. With your permission, we may also take a photograph of you. These will be used for the purpose of the current study and may be included in academic publications and other material for WFP and Anthrologica. If your photograph is published, you shall not be identified by name and the usual confidential process shall be followed.

In regard to collecting information for this study, we would greatly appreciate your help and therefore seek your consent and cooperation. If you have any questions or concerns about this study you can address them by contacting Dina Aburmishan, tel: 0798470198 or email: dina.aburmishan@wfp.org. You may contact the ethics review committee at KEMRI/SERU P.O.Box 54840-00100, Tel: 0717719477 or email SERU@kemri.org.

INFORMED CONSENT

I have been informed in detail about the purpose and nature of this study.

I have received satisfactory answers to all my questions relating to this study.

I have decided that I will participate willingly and can withdraw at any time for any reason.

I give my informed consent to participate in this study and have my photograph taken as part of the study.

Name of Participant

Signature

Date

Name of Witness

Signature

Date

As a witness of this letter, I ensure that I have the above information has been accurately conveyed to the participant. I also ensure that they have decided to participate in this study freely and willingly.

Informed consent form (18+ years) community leaders, caregivers, influential persons

Formative Research for Adolescent Nutrition Programming in Kenya

WHY AM I BEING ASKED TO TAKE PART IN THIS RESEARCH? You are being asked to take part in a research study about adolescent nutrition in Kenya and to share your thoughts on the best methods that organisations like the World Food Programme can use to talk to adolescents about their nutrition needs. You are being asked to take part in this research study because you can provide important information on this topic. If you take part in this study, you will be one of several adults and several groups of adolescents also participating in this study.

WHO IS DOING THE STUDY? The person conducting this study is called the Primary Investigator (or PI) and, together with the assistance of a local Research Assistant, will be asking you questions. The local Research Assistant will help to translate your words for the PI so you may speak in whatever language you feel most comfortable.

WHAT IS THE PURPOSE OF THIS STUDY? By doing this study, we hope to learn about adolescent's nutritional needs and experiences and about how they prefer to receive communications from, or be contacted by, organisations like the World Food Programme with information.

WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST? The study will be take place in your community. You may be invited to attend a discussion group with other adults, led by the PI and the Research Assistant. Each of these sessions may take between 45 minutes to 2 hours. You may also be asked to participate in one interview session with the PI and the Research Assistant if needed. These interviews will last approximately 30 minutes to 1 and a half hours.

WHAT WILL I BE ASKED TO DO? You will be invited to participate in a group discussions or individual interview about issues to do with adolescents and their needs and preferences when it comes to food. You will also be asked to share your ideas about how organisations like the WFP can better communicate with the adolescents in your community. If you take part in this study, you will be asked to participate in discussions with the PI and the Research Assistant. If you agree that you do not mind, I will record what we say during the discussion so that I can be certain about exactly what your ideas are and listen to them carefully again to make sure I have not missed anything. Your name will not be on the tape, and no one else will be able to figure out who you are after it is recorded. Only I will be able to have that information, no one else. Later on, when the tapes are transcribed or results published, no one will be able to identify you. With your permission, we may also take photographs during group activities. Your participation in this project is voluntary, this means that you do not have to participate in group discussions and you do not have to answer any of my questions. If you do want to participate now, but change your mind later on, then you will be excused from the study without penalty. You can ask me questions at any time if you have any concerns about this project.

WHAT THINGS MIGHT HAPPEN IF I PARTICIPATE? WHAT IF I CANNOT ANSWER THE QUESTIONS? No harm will come to you for participating in this research. We are interested in learning about your personal thoughts and experiences so you will be able to answer questions or participate in group activities based on these experiences. However, if you do not have a response to a question or do not wish to participate in an activity, you do not have to and no one will be mad at you for choosing not to answer/participate.

DO I HAVE TO TAKE PART IN THE STUDY? If you do not want to take part in the study, that is your decision. You should take part in this study only because you really want to volunteer.

IF I DON'T WANT TO TAKE PART IN THE STUDY, WHAT WILL HAPPEN? If you do not want to be in the study, nothing else will happen.

WILL I RECEIVE ANY REWARDS FOR TAKING PART IN THE STUDY? You will not receive any reward for taking part in this study; however, if you participate in group activities that produce photos, artwork, etc. you may be given a copy of your work. Your opinions and experience will have guided the study findings which will help shape WFP policy and programme decisions. You may see the study reports circulated in Kenya and internationally.

WHO WILL SEE THE INFORMATION I GIVE? Your information will be added to the information from other people taking part in the study so no one will know who you are.

CAN I CHANGE MY MIND AND QUIT? If you decide to take part in the study you still have the right to change your mind later. No one will think badly of you if you decide to quit.

WHAT IF I HAVE QUESTIONS? You can ask the research team any questions about this study at any time. If you think of other questions later, you can ask them by contacting Dina Aburmishan, tel: 0798470198 or email: dina.aburmishan@wfp.org. You may contact the ethics review committee at KEMRI/SERU P.O.Box 54840-00100, Tel: 0717719477 or email SERU@kemri.org.

Consent to Participate - I understand what the person running this study is asking me to do. I have thought about this and agree to take part in this study.

_____ **Name of Participant**
_____ **Name of Witness**
_____ / _____ **Signature Date**
_____ / _____ **Signature Date**

As a witness of this letter, I ensure that the above information has been accurately conveyed to the participant. I also ensure that they have decided to participate in this study freely and willingly.

Informed assent form, for participants under 18 years old

Formative Research for Adolescent Nutrition Programming in Kenya

PARENT INFORMATION

The young person in your care is being asked to take part in a research study about adolescent nutrition in Kenya and to share their thoughts on the best methods that organisations like the World Food Programme can use to talk to adolescents about their nutrition needs. If they take part in this study, they will be one of several groups of adolescents also participating in this study. As the young person is below the age of 18, permission must be sought from the caregiver (you). This information sheet will help you decide whether or not to give permission.

By doing this study, we hope to learn about nutritional needs and experiences as expressed by adolescents. We hope to learn about how adolescents prefer to receive communications from, or be contacted by, organisations like the World Food Programme with information.

The study will be take place in your community. The adolescents who volunteer may be invited to attend a discussion group or participate in group activities with other adolescents, led by the Principal Investigator (PI) and the Research Assistant. Each of these sessions may take between 45 minutes to 4 hours

They will be invited to participate in a group discussions or individual interview about issues to do with adolescents and their needs and preferences when it comes to food and about how organisations like the WFP can better communicate with the adolescents in their community.

If you both agree, the PI will record what is said during the discussions to be certain not to miss anything. The young person's name will not be on the tape, and no one else will be able to figure out who they are after it is recorded. With both of your permission, we may also take photographs during group activities.

Participation in this project is voluntary, this means that you do not have to agree and the young person does not have to take part if they do not want to.

They will not receive any reward for taking part in this study; however, if they participate in group activities that produce photos, artwork, etc. they may be given a copy of their work and see their work reproduced for reports that will circulate in Kenya and internationally.

If you decide to give permission you still have the right to change your mind later. If the young person agrees to participate but changes their mind later, they can leave the session at any time.

WHAT IF I HAVE QUESTIONS? You can ask the research team any questions about this study at any time. If you think of other questions later, you can ask them by contacting Dina Aburmishan, tel: 0798470198 or email: dina.aburmishan@wfp.org. You may contact the ethics review committee at KEMRI/SERU P.O.Box 54840-00100, Tel: 0717719477 or email SERU@kemri.org.

PARTICIPANT INFORMATION

WHY AM I BEING ASKED TO TAKE PART IN THIS RESEARCH? You are being asked to take part in a research study about adolescent nutrition in Kenya and to share your thoughts on the best methods that organisations like the World Food Programme can use to talk to you about your nutrition needs. You are being asked to take part in this research study because you are a person between the ages of 10 and 17 years-old and can provide important information on your personal thoughts and experiences. If you take part in this study, you will be one of several adolescents also participating in this study.

WHO IS DOING THE STUDY? The person conducting this study is called the Primary Investigator (or PI) and, together with the assistance of a local Research Assistant, will be asking you questions. The local Research Assistant will help to translate your words for the PI so you may speak in whatever language you feel most comfortable.

WHAT IS THE PURPOSE OF THIS STUDY? By doing this study, we hope to learn about your nutritional needs and experiences and about how you prefer to receive communications from, or be contacted by, organisations like the World Food Programme (WFP) with information.

WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST? The study will be take place in your community. You may be invited to attend a discussion group or participate in group activities with other adolescents, led by the PI and the Research Assistant. Each of these sessions may take between 2 hours to 4 hours. You may also be asked to participate in one interview session with the PI and the Research Assistant if needed. These interviews will last approximately 45 minutes to 1 hour.

WHAT WILL I BE ASKED TO DO? You will be invited to participate in a group discussion or individual interview about your daily experiences and practices with food, and to share ideas about your nutrition requirements. You will be asked to share your ideas about how organisations like WFP can better communicate with you.

If you take part in this study, you will be asked to participate in discussions with the PI and the Research Assistant, or to participate in activities with other adolescents of the same age. If you agree that you do not mind, I will record what we say during the discussion so that I can be certain about exactly what your ideas are and go back and listen to them carefully again to make sure I have not missed anything. Your name will not be on the tape, and no one else will be able to figure out who you are after it is recorded. Only I will be able to have that information, no one else. Later on, when the tapes are transcribed or results published, no one will be able to identify you. With your permission, we may also take photographs during group activities.

Your participation in this project is voluntary, this means that you do not have to participate in group discussions and you do not have to answer any of my questions. If you do want to participate now, but change your mind later on, then you will be excused from the study without penalty. No one will be mad at your for not participating or choosing not to complete the research. You can ask me questions at any time if you have any concerns about this project.

WHAT THINGS MIGHT HAPPEN IF I PARTICIPATE? WHAT IF I CANNOT ANSWER THE QUESTIONS? No harm will come to you for participating in this research. We are interested in learning about your personal thoughts and experiences so you will be able to answer questions or participate in group activities based on these experiences. However, if you do not have a response to a question or do not wish to participate in an activity, you do not have to and no one will be mad at you for choosing not to answer/participate.

DO I HAVE TO TAKE PART IN THE STUDY? If you do not want to take part in the study, that is your decision. You should take part in this study only because you really want to volunteer.

IF I DON'T WANT TO TAKE PART IN THE STUDY, WHAT WILL HAPPEN? If you do not want to be in the study, nothing else will happen.

WILL I RECEIVE ANY REWARDS FOR TAKING PART IN THE STUDY? You will not receive any reward for taking part in this study; however, if you participate in group activities that produce photos, artwork, etc. you may be given a copy of your work and you may see your work reproduced for reports that will circulate in Kenya and internationally.

WHO WILL SEE THE INFORMATION I GIVE? Your information will be added to the information from other people taking part in the study so no one will know who you are.

CAN I CHANGE MY MIND AND QUIT? If you decide to take part in the study you still have the right to change your mind later. No one will think badly of you if you decide to quit.

WHAT IF I HAVE QUESTIONS? You can ask the research team any questions about this study at any time. You can also talk with your parent/guardian or other adolescents and adults that you trust about this study. If you think of other questions later, you can ask them by contacting Dina Aburmishan, tel: 0798470198 or email: dina.aburmishan@wfp.org. You may contact the ethics review committee at KEMRI/SERU P.O.Box 54840-00100, Tel: 0717719477 or email SERU@kemri.org.

Assent to Participate - I understand what the person running this study is asking me to do. I have thought about this and agree to take part in this study.

_____ **Name of Participant**
_____ **Name of Parent/Guardian**
_____ **Signature Date**
_____ **Signature Date**

As a witness of this letter, I ensure that the above information has been accurately conveyed to the participant. I also ensure that they have decided to participate in this study freely and willingly.

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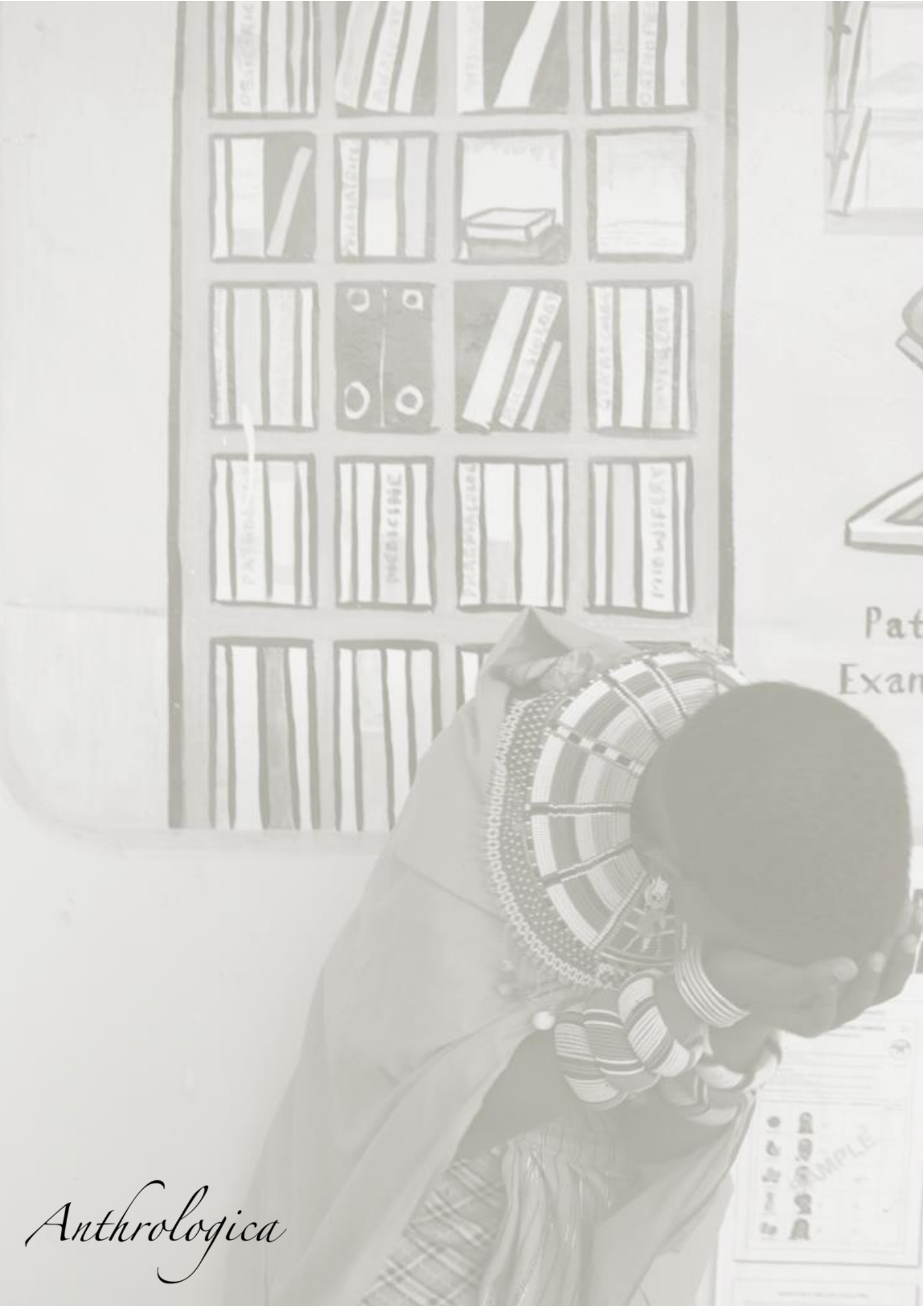
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