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Rural Turkana Food Environment: Consumers’ Perspectives

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1. Introduction

Food systems encompass various actors and their interlinked value-adding activities in the production, aggregation, processing, distribution, consumption, and disposal of food (FAO, 2018). The food environment (FE), an element of a food system, describes the consumer interface with the food system that encompasses the availability, affordability, convenience, promotion, quality, and sustainability of foods and beverages in wild, cultivated, and built spaces that are influenced by the socio-cultural and political environments and ecosystems within which they are embedded (Down et al. 2020). According to the High-Level Panel of Experts (HLPE) physical and economic access to food (proximity and affordability); food promotion, advertising and information; and food quality and safety are the key elements of the food environment that influence food choices, food acceptability and diets.

Within the low - and middle - income countries (LMICs) food environment research is gaining prominence. Most of these studies, however, focus on overweight and obesity with little focus on undernutrition which is still rampant in LMICs (Turner et al., 2018). Similarly, few researchers make use of qualitative research methods to capture the local perceptions and experiences surrounding the communities’ food environment. The current study conducted in Kenya’s drought – prone arid Turkana County aimed at understanding consumers’ perceptions of their own local food environment. The county is characterized by harsh climatic conditions, high poverty levels, remoteness, poor infrastructure, insecurity, and low access to essential services (Republic of Kenya, 2019).

2. Methods

Eighteen in-depth interviews were conducted in the local Turkana language by one trained interviewer who had prior experience in qualitative research; and who was a native in the study area. The respondents were purposively selected based on their apparent knowledge of the community’s food environment. The eighteen respondents were drawn equally from ten community health units within Loima and Turkana South sub-counties, with the help of community health volunteers. Prior to the interviews, the study obtained clearance from the AMREF Ethics and Scientific Review Committee (ESRC) – P688/2019. Informed consent was sought from all study participants.

To facilitate the interviews, the interviewer had a set of questions to guide the discussions which were recorded, transcribed and translated to English for analysis. Analysis followed Hsieh and Shannon’s 2005 definition. Considering the data was collected following the elements of the food environment,

directed content analysis method was first used to interpret the text data in line with the FE elements. Summative approach was applied to identify and quantify words in the text to understand their contextual use (Hsieh and Shannon, 2005).

3. Results and Discussion

Food sources and food availability

The interviewed households mentioned 6 sources of food, with markets and shops being the most common- mentioned 32 times in the discussions. Wild food consumption was common among all participants, though most mentioned the consumption to be among other community members and not themselves. Barter trade also featured prominently, (14 out of 18 participants) as a way through which food is acquired in the community. All respondents were involved in agricultural production. They practised crop farming, livestock rearing and a combination of both crop and livestock farming. A total of 18 plant and animal species were mentioned. Sorghum and cowpeas were the most planted crops (frequency of 14 each), while goat and sheep were the most domesticated animals (frequency of 13 each).

The elements of availability, accessibility, affordability, quality and safety were cited as reasons why the respondents liked consuming foods from their own farms. Despite preferring food produced from their farms, they indicated that the harvest is never enough to last to the next harvest season.

“I like food from my farm because of easy availability, accessibility and freshness of the foods.”

“In my view, own harvested food is of higher quality compared to foods from other sources.”

“When my family consumes food from our farm we save a lot of money that would have otherwise been used to buy food.”

Food aid was also mentioned as a source of food. Vulnerable people in the community are identified by community health volunteers who referred them to health facilities where they get registered to receive food rations.

Foods acquired from own farm production, the wild, gifts and barter trade are sometimes sold to meet other household needs like paying for school fees and medical bills; or buying other food and non-food items required in the household. A participant who practiced farming said whenever the household had surplus produce they shared with family members and neighbours who did not practice crop farming. Others mentioned that goats and sheep were used for cultural activities like paying dowry during marriage and other family related rituals. All products were sold by either the man or wife who determined selling price depending on market demand and product quality. The higher the demand and quality, the higher the price and vice versa. Wild foods were mainly collected and sold by the women.

Convenience

In addition to home cooked foods, the respondents said they utilised ready to eat foods that have been prepared out of their homes. The foods mentioned include *Githeri* (mixed dish of maize and beans), tea, *chapatti*, *mandazi*, samosa, roast meat, *ugali*, vegetables, chips, doughnuts, *pilau*, rice, beans, sweet potatoes, boiled maize, coffee, goat milk, traditional fermented milk, porridge, roasted maize, breads, bananas and sugarcane.

On if they enjoyed these ready to eat foods, majority (56%) of them enjoyed the homemade foods more than these ready to eat foods. Two respondents said they enjoy equally the same. They cited easy and abundant availability, convenience and affordability as reasons why they liked these ready to eat foods. Since the foods are readily available, the locals purchase regularly whenever one has money and the need for food arises.

“I like these foods because they are available and ready to eat so I don’t waste time cooking.”

“These street foods are readily available in abundance and the prices are cheap.”

“The good thing about the street foods is that they are cheaply priced and sold in different sizes, therefore everybody can afford to buy.”

The participants also mentioned they utilised packaged foods like sugar, maize flour, salt, rice, pasta, tealeaves, milk, wheat flour, soda, biscuits, cooking oil, tealeaves, green grams, spices, UHT milk, bread and sweets, among others. Maize flour is the product that is mostly purchased. Like the ready to eat foods, packaged foods are purchased whenever there is need and money available to purchase. Packaged foods are liked because they are of good quality, safe, hygienic and free from contamination. They are also liked because they are easy to carry and they have a longer shelf life compared to fresh food items. Packaged foods are generally affordable because they are packaged in various quantities, therefore people can buy the amount they can afford. Some packaged foods are expensive but people buy because they like them.

The mobile truck vendors were majorly mentioned as a source of food in Turkana South sub county. The vendors come from Kitale and Uganda. The mobile truck vendors were preferred for various reasons that include:

- They bring food stuff closer to customers hence no transport costs incurred
- They come in homesteads and their prices are cheaper than the regular market
- Many food items are conveniently available at the right time, place and prices

Just like the markets, the mobile truck vendors usually don’t have some foods in stock. When the desired foods are not available, some residents either resolve to consume available alternatives or do without and wait for another vendor. A number of them indicated that they buy what is available even when it is not their preferred food item. Others said they opted to source from markets within and outside the community area.

“When the food item I want is not available, I just purchase an alternative food that is available in the local market, or I replace with traditional wild foods.”

Food purchasing from the vendors is done by the women because it is one of their household responsibilities as the one in charge of food in the household; and also because they are knowledgeable about good nutrition practises. The frequency of food purchasing from the vendors was varied. Some households shop following the vendors’ schedule- whenever they come to the village, others shop according to availability of money in the household, and there are those who buy on need.

Sustainable food availability

We had discussions on ways through which the community, county government, national government and development partners in the area could ensure food is available for the local residents throughout the year, regardless of the changing seasons. Many highlighted the need to harvest and reserve rain water that result to floods during the rainy seasons. The water would later be used to irrigate farms thereby ensuring all year food supply. Other ways that were mentioned of ensuring all year food availability for all were:

- Reduction of taxes on food items
- Replacing food aid with cash for work programs so that the locals can embrace self-reliance instead of waiting and relying on food aid donations

- The national and county governments to facilitate rural farmers with financial and material support through affordable credit facilities, agricultural skills, extension services, technologies and farm inputs to enhance agricultural production
- Provision of restocking programs to destitute households during plenty season and destocking during lean season
- Provide drip irrigation projects that will operate using green solar energy
- Community to embrace diverse livestock marketing activities
- NGOs to provide seed money that will stimulate establishment of entrepreneurship activities which will enhance local livelihoods and food purchasing power.

Challenges to food availability and access

The respondents mentioned the following challenges to food availability and access:

- Unpredictable weather- both floods and droughts affect the quality and quantity of food produced in the farms
- Pests and diseases attack both crops and animal, leading to death of animals and crops drying up before maturity hence losses
- They also mentioned lack of credit facilities, farming tools and farm inputs to enhance their farm production
- Acquiring food from the wild is hindered by long trekking distances in the hot sun. The fruit trees are also being depleted due to rampant deforestation leading to desertification. The fruits and vegetables are scarce during dry seasons when the residents need them most
- Government taxation on food makes the food more expensive and unaffordable
- Most foods are in short supply and highly priced in the dry season, which is almost the whole year because Turkana is an arid area
- Poor road infrastructure which results to high costs of transport to markets to get food
- We collected the data in the wake of the Covid 19 pandemic. Due to travel restrictions and curfews put in place by the government, access to food was limited. Some households also mentioned loss of jobs which in turn resulted to challenged access to food.

4. Conclusions

In addition to the widely used methods of food acquisition like purchasing and own production, other non-conventional methods like acquiring from the wild and bartering are still sources of food in remote communities hence should be factored when assessing their food sources.

Despite facing climatic and cultural challenges that hinder own farm production, the Turkana community are willing to engage in farming if they can be facilitated with the expertise, farm inputs and irrigation infrastructure.

Ready to eat foods are fast gaining prominence in rural communities. People should be empowered with knowledge on healthy and diverse food choices for better nutrition and health outcomes.

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