





USAID'S HEALTH EVALUATION AND APPLIED RESEARCH DEVELOPMENT (HEARD) PROJECT

Nutrition, Water, Sanitation & Hygiene Assessment among Urban Poor Children and Adolescents: A Community Case study of Katwe II slum in Kampala, Uganda

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Investigators

Dr. Jane Francis Namukasa Wanyama, BCP, MPH, PhD (Infectious Diseases Institute-Uganda) Dr. Agnes Nanyonjo Mbabaali, MBChB, MPH, PhD (Infectious Diseases Institute-Uganda) Tom Kakaire Kirunda, BBA, MA (Infectious Diseases Institute-Uganda)

List of Abbreviations

FGD: Focus Group Discussions
GPS: Global Positioning Systems
HEARD: Health Evaluation and Applied Research Development
KIIs: Key Informant Interviews
KCCA: Kampala Capital City Authority

WASH: Water, Sanitation and Hygiene

Abstract

Background: Although the consequences of urbanization on diverse socio-economic groups are well documented, how to address the health and development needs of the most vulnerable children is poorly understood. To gain an in-depth understanding of the factors that contribute to poor nutrition of children among the urban poor and identify the best approaches to addressing these problems, a community case study was conducted in the Katwe II slum in Kampala, Uganda. **Methods:** This qualitative case study triangulated data from a mapping exercise of community stakeholders, Focus Group Discussions (FGDs), Key Informant Interviews (KIIs) and community workshops. Mapping of community stakeholders was done to capture key actors in nutritional service delivery. FGDs were conducted with primary caregivers of children under-five including adolescent mothers. KIIs were done with already known stakeholders: Midwives involved in Maternal New-born and Child Health (MNCH) services, Day care workers and Local Council Representatives. Community workshops were done with Kampala City Council Authority (KCCA), religious, cultural and local council leaders, to identify policies and strategies that shape nutrition and the formal/informal systems and services related to child nutrition in Katwe II. The community workshop, FGD and KII sessions were audio-recorded and transcribed. Transcripts were subjected to thematic content analysis using Atlas.ti version 8.0.

Results: Children in Katwe II are faced with various nutrition and WASH vulnerabilities due to flooding, high influx of refugees, ignorance about proper nutrition, and teenage pregancy, among other issues. They are exposed to dangerous environmental exposures such as lack of toilets, poor drainage systems and lack of solid waste disposal services. However, residents of Katwe II have no water access problems. Socio-economic vulnerabilities such as mothers/caregiver age, type of work, gender and income levels influence child nutrition and health in general. Although no nutrition-specific interventions were found in the slum, there are various WASH-related interventions. WEYONJE was identified as an ideal community intervention.

Conclusions: There is an urgent need to design interventions to address the above mentioned child nutrition vulnerabilities. However, for such interventions to have the required impact, they must be tailored in such a way that they involve the community in both design and implementation, and provide employment opportunities to community members and be people-centred among others.

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Introduction and Aim

Urban Poor Children Vulnerabilities

As the urban population increases globally, many of the poor are living in slums or informal settlements. Some common aspects of urban informal settlements are that they have rapidly growing populations which have increasing food insecurity, very little access to quality and affordable infrastructure services (e.g. water, sanitation, energy, etc.), and limited access to affordable quality health care and preventative services. Children of the urban poor are among the most vulnerable to urban health inequities. Approximately 200 million children live in urban Africa and are vulnerable to the consequences of extreme poverty (Save the Children, 2012). In Sub-Saharan Africa, 61% of diarrhea deaths are attributable to inadequate water, sanitation and poor hand hygiene (Prüss-Ustün et al., 2014). One in three children under-five in Africa were growth-stunted in 2011, with moderate to severe stunting in nearly 1 in 2 children in the lowest wealth quintile (Frayne et al., 2012).

The factors that influence the health and wellbeing of the poor children and adolescents are multidimensional, driven by a combination of issues that include poverty, gender, ethnic discrimination, unsafe living conditions, poor quality and high cost of services, and a lack of primary and other medical care. Poor diet in childhood can lead to persistent nutritional deficits and a lifetime of physical and cognitive impairment. Reducing food insecurity, addressing malnutrition, and improving access to sanitation and hygiene interventions are increasing challenges for Africa's cities. The most recent Uganda Demographics and Health Survey (2016) indicated that prevalence of Global Acute Malnutrition in Kampala was at 3.9% while stunting was at 18.1% and that more than half (50.9%) of children were anemic. Although the consequences of urbanization on diverse socio-economic groups are well documented, how to address the health and development needs of the most vulnerable children is poorly-understood. To explore this challenge, the USAID's Health Evaluation and Applied Research Development (HEARD) project sought to conduct a community case study in Katwe II slum in Kampala. The community case study was informed by previous urban health assessment work which involved a literature review, stakeholder mapping, data and policy inventory and contributes to answering the overall assessment question: what contributes to poor nutrition among children and adolescents and what solutions can be used to best address their needs?

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Ethical Approval

This study was approved by the Infectious Diseases Institute Scientific Review Committee, Makerere University School of Public Health Higher Degrees, Research Ethics Committee (Protocol number 678) and registered by the Uganda National Council for Science Technology (SS 5030).

Objectives

General objective

To assess what factors contribute to poor nutrition among children in Katwe II slum and what solutions can be used to best address their needs.

Specific objectives

The specific objectives were thus to explore:

- i. Formal/informal food systems and services in the community;
- ii. Environmental factors that can influence potentially adverse exposures;
- iii. Key actors and platforms that influence nutrition of children;
- iv. Socio-cultural and economic factors (vulnerabilities) that influence behaviors related to child nutrition in poor urban contexts;
- v. Programs and initiatives that shape nutrition and Water, Sanitation and Hygiene (WASH).

Methods

Study Site

Katwe II is one of the largest slums found in Kampala city with a growing population following the development of Kisenyi slum by the Kampala Capital City Authority (KCCA). Katwe II is home to close to 7,500 households with an average household size of five members thus having a population close to 35,000 people. Administratively, the settlement is a ward located in Makindye Division bordered by Katwe 1, Kibuye 1 and Nsambya in the East, South and West respectively. The settlement is made up of a total of twelve zones/cells which are the smallest administrative unit. Administratively, the settlement is a ward located in Makindye Division and bordered by other wards like; Katwe 1, Kibuye 1 and Nsambya in the East, South and West respectively.

zone or cell is the smallest administrative unit below a parish, and Katwe II parish is made up of a total of 8 zones namely; Base zone, Central zone, Ttawo zone, West zone, Kiganda zone, Kevina zone, Byuma zone and Katenda.

Katwe II is in close in proximity to the Central Business District making it an ideal home for lowincome earners to walk to their places of work from home. The residents of Katwe II settlement earn a living through running small businesses such as street or market vendors, as motor bicycle cyclists, or taxi drivers, with majority being employed in the city as casual labourers. However, Kiwawulo (2008) showed that the settlement is home of the city's most notorious gang of thieves. This is probably because more than 90% of the households of the settlement live in extreme poverty compared to the neighboring Kibuye (80%) and Kisenyi (85%), making Katwe II an ideal location for a case study focused on an urban poor population.

Notably, ease of gaining access to the respondents was considered as a major factor in the selection of an informal settlement for this case study. In consultation with various stakeholders including Kampala Capital City Authority (KCCA) and our community partner ACTogether-Uganda, the informal settlements of Katwe II were selected as the most ideal for this case study.

Community Partner

A team from ACTogether-Uganda was selected to support the Infectious Diseases Institute (IDI) and HEARD project team with data collection for the community case study. This is because ACTogether has on-going projects in Katwe II targeting urban poor households under the umbrella of the National Slum Dwellers Federation of Uganda.

Data Collection

The following methods were used to collect data based on predetermined themes:

Community Mapping

The goal was to we identify the context of systems, services, key players and geography as it relates to child nutrition. A team of four Research Assistants from ACTogether and Makerere University Urban Action lab, including the team lead walked through all the zones of Katwe II while holding a Global Positioning Systems (GPS) machine to identify services, key players and geography related to child nutrition, water, sanitation and hygiene. Mapping was done by the

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research data collection team accompanied by members of the National Slum Dwellers Federation of Uganda who work closely with ACTogether-Uganda who are residents of Katwe II slum. Once a service or actor that related to the subject matter was identified, their geographical location was recorded with the help of a handheld GPS machine. The data collection team mapped the stakeholders throughout the community over a period of two weeks. To complete this work, the team talked with known stakeholders, local council leaders and residents they encountered and crosschecked information about location and distribution of nutrition/WASH services in this community. All spatial data were compiled into layers using the free, open-source desktop GIS program QGIS.

Key Informant Interviews (KIIs)

A total of 16 KIIs were conducted with Local council representatives (n=4), Teachers at formal Day care centres (n=2), informal Day caregivers (n=2) and with health workers at public health facilities specifically from the Maternal New-born and child health/nutrition departments at Kisenyi Health centre IV(n=2) and Nsambya Police Barracks Health centre(n=2). These two health facilities were purposively selected after obtaining information from the participants that these are the most used health facilities. Additional four KIIs were held with Health care workers from private health facilities found in Katwe II. KIIs lasted approximately about 40 minutes. All KII sessions were audio-recorded and transcribed.

Focus Group Discussions (FGDs)

A total of 8 FGDs were held with a purposively selected sample of primary caregivers of children under five years from the different zones of Katwe II. Participants included primary caregivers of children under five including adolescent, adult mothers and fathers based on their availability and willingness/ability to provide written informed consent prior to the discussion. Informed consent and permission to record the FGD sessions was obtained from all participants. Discussions were conducted by trained Research Assistants with experience in qualitative data collection. FGDs were conducted in Luganda (the most commonly spoken local language in Katwe II). FGDs lasted approximately 60 minutes. All FGD sessions were audio-recorded and transcribed.

Community Workshops

In order to triangulate the information obtained from community mapping, FGDs, KIIs and a community workshop was held with leaders of the different zones of Katwe II. The community

workshop was held at Nsambya community Hall. Participants included leaders from Makindye Division, religious and local council leaders to validate the information earlier captured and to gain in-depth understanding of nutrition, WASH and health needs of children and adolescents in Katwe II slum. The workshops provided opportunity to further understand child and adolescent nutrition from a diversity of perspectives but from within the community and participants made recommendations for improving child and adolescent nutrition in Katwe II. The workshop lasted close to three hours and the session was audio-recorded and transcribed.

Data Analysis

Community Mapping

Geographical locations of key actors were recorded into the handheld GPS device and later imported into a GIS (Geographical Information System) environment using an open source application, QGIS (Quantum GIS). With the aid of a computer application, we were able to produce a GIS map of the actors.

Interviews and Community Workshop Data

All KIIs, FGDs and community workshop sessions were transcribed and then translated into English by the interviewer. A 10% back translation was done for quality control. Transcript review began while data collection was still underway, and participant responses were used to shape future interview questions. Verbatim transcripts and sociodemographic information were used for analysis. Two independent coders used the word processed text to develop a codebook by categorizing responses from the interviews to identify themes generated from the KIIs, FGDs and community workshop about Formal/informal food systems and services; Environmental factors that can potentially influence adverse exposures; Key actors and platforms that influence nutrition of children; Socio-cultural and economic factors that influence behaviors related to child nutrition in poor urban contexts; and Programs and initiatives that shape nutrition and WASH. Themes were predetermined and categorized in accordance with an inverted UNICEF framework for malnutrition. The UNICEF framework for malnutrition. Transcripts were subjected to thematic content analysis using Atlas-ti version 6.0. Quotations from the participants are denoted by type of interview.

Data Synthesis

The data collection process began with the community mapping. However, during the process of conducting the FGDs and KIIs we realized that there were other actors and services that are important to the community members of Katwe II that had not been included. We therefore cancelled the first mapping results and continued with the FGDs and KIIS. We also found out that there were key actors and services that were located outside the community but were being utilized by residents of Katwe II such as Kisenyi Health Centre IV, Nsambya Barracks Health Centre and Kiruddu General Referral Hospital.

Findings

General Health Challenges of Katwe II

Participants described their community as having many health problems which include but not limited to the following:

It was reported that the settlement experiences flooding during the rainy season. The floods in the settlement are worsened by the fact that the drainage channels which would have enabled the smooth flow of water are not well-maintained. The drainage channels are blocked by earthly material such as sand mud and dumping waste. As a result, stagnant water becomes a breeding ground for disease causing organisms as was mentioned by one leader during the community workshop:

"This week, the floods destroyed the houses of many residents in Base zone, and many people including their little children do not have where to stay and their property has been destroyed."

There is high influx of refugees in Katwe II possibly because accommodation is cheaper in Katwe II compared to other informal settlements in Kampala. This has led to competition for the already limited services, especially for health services, as mentioned by a female FGD participant.

"When they come here, we must compete for everything; schools, health facilities, public toilets, housing, and even the price of food in the market has increased because of the demand. The challenge is that while they have support from government and other organizations like the UN, for us who are citizens do not."

There is no single public toilet in the settlement for the general public except in some markets, shopping areas, video halls, etc. As a result, residents opt for unhygienic practices such as open defecation.

Other general health and nutrition-related challenges mentioned:

• Teenage pregnancies are a common occurrence in the area yet the young mothers are not well prepared or ready to look after the children.

- Healthcare is unaffordable to the poor who are the majority in the community. As a result, residents resort to herbal medicine which is cheap and the fact that those who sell it claim that it can cure many if not all conditions.
- The majority of the residents are very poor. The daily struggles to make ends meet separate parents from their children who end up without adequate care.
- Ignorance about what a nutritious meal means. Some people think that good nutrition means buying expensive food items.
- Inadequate garbage management services: solid waste is collected at a fee by private companies. This leaves a lot of waste uncollected and later dumped all over especially in the drainage channels.
- Even though most houses have toilets, they are poorly maintained and their quality is so poor.

Key Actors and Platforms That Influence Nutrition of Children

The community mapping exercise was intended to identify formal/informal food systems and services in Katwe II community. During the community mapping exercise, institutional and organizational actors were identified and described here.

Key Actors

It was mentioned that parents are the main actors because they determine what children eat. It was mentioned in KII that house maids/house helps are critical key actors for child nutrition/WASH. They spend more time with the child and determine what and how to feed the children:

"As a working mother, you can leave home having prepared milk for your child and tell the maid to feed the child but what they do is to eat what is meant to be for child."

It was mentioned in FGDs, KIIs and community case study that there are Institutions actors such as Day care centers, Kindergartens, medical clinics and health centers place a central role regarding nutrition and WASH in this community. Respondents reported that there are several Day care centers in Katwe II where parents who are unable to take care of their children due to work or other reasons take them to be cared for by an adult at a fee and pick them later during the day. Two categories of Day care centers were identified in this community; formal and informal. Formal Day care centers which are often part of a Kindergartens, host not more than 10 children per day.

Informal Day care centers, on the other hand are homes of individuals with an adult caretaker and can host up to 5 children per day for a fee. While Formal Day care centers charge standard school fees (at least \$100 for 3months), child care fees paid at the informal Day care centers vary depending on what the parent can afford (usual not less than \$1 per day).

It was mentioned in the community workshop that child care services are the same in both formal and informal Day care centers. Caretakers ensure that the child is fed, bathed and rests. Formal Day care centers on the other hand, may add early child stimulation and learning. Informal Day care centers mainly feed and some of them bathe the child before they are picked by the parent:

"I do not exceed three children because that is what I can handle effectively. When they are brought, my work is to feed them on what the mother has packed for each of them. Most of the time mothers prepare the same poor quality foods because they are in a rush."

It was mentioned in FGDs and KIIs with Day care center attendants that residents these Day care centers in high regard:

"There is added value because children learn at a very young stage to interact with other people because there are always other young children with them at the centers."

It was mentioned in KII that there are Nursery schools and Kindergartens which are educational facilities permitted to admit children above 3 years. However, as we conducted community mapping we found some privately owned Kindergartens that had children as young as two years. It was recounted in KII that all children are served the same common meals prepared at the school. No specific attention is paid to the nutritional content of the foods served:

"We have many children and we serve them locally available foods such as porridge. Some young ones however have poor appetite so they refuse the food."

It was often mentioned that there is no single public/government health facility in Katwe II thus forcing residents to seek care services outside the settlement. Private health services are not easily accessible because they are expensive:

"We would have been able to go to Nsambya Hospital because it is just next door, just using this road in our community but the services there are so expensive and only those who are rich can afford to go there or take their children."

The available health facilities are privately owned. However, on specific days in a month some of the medical centers offer free child immunization services to the residents but nothing specific is mentioned about child nutrition or WASH. Residents have to move out of the settlement to go to Kisenyi Health Center IV to get care but when they go there they wait for long hours which affects child nutrition as it was severally mentioned by primary caregivers during FGDs:

"You can go to Kisenyi and find the doctors or nurses as if they are not interested in seeing sick people. We end up waiting for long and get back home very late and fail to prepare food for the children."

Organizational actors

It was reported during community mapping that there are some organizations that are promoting child and adolescent nutrition/WASH in Katwe II. These organizations include Child's Eye Foundation, NUTRAC, Shelter and Settlement Alternatives (SSA) and the Infectious Diseases Institute (IDI).

Child's Eye Foundation is involved in rehabilitation of former street children through reaching out to their families. The support to the children is extended through their families with the aim of keeping the child at home rather than be on the street. The support includes supplying food items due to the fact many children from Katwe II leave home for streets in search for food because their parents are unable to provide.

NUTRAC: Involved in improving the living conditions of the residents of Katwe II with focus on children's rights to live in a healthy environment. Additionally, they organize home-to-home sensitization about good sanitation and nutrition practices.

Shelter and Settlement Alternatives (SSA): Organizes community general cleaning drives, community health camps and community sensitization to educate slum dwellers to live in a clean

environment.

Infectious Diseases Institute (IDI): Reaches out to Orphans and vulnerable children through school fees and nutritional support programs and financial empowerment of care takers.

Service Provider	Target	Issues of Focus	Target zone
	Stakeholder		
Nsambya Full Gospel	Children under	Education	Base
Nursey	5 years		
Base Food Stall		Sells food	Base
Assumpta Medical Clinic	Children under	Child health	Base
	5 years		
Favour Medical Clinic	All residents;	Antenatal services	Base
Vegetable Stall - Base	Sells vegetables		Base
Central market Food	Sells food		Central
Stall			
Central Primary School	Children under	Education	Central
	5 years		
Namunda Medical	All residents	Antenatal services	Central
Centre			
Shaban Herbal shop		Herbal medicine	Central
Food Stall	Sells food		Central
Katwe United Primary	Children under	Infant Education	Central
School	5 years		
Food Stall	Sells Matooke	Infant Education	West
Comfort Nursing	Day care and	Infant Education	West
	Nursing		
Highway Primary School	Children under	Infant Education	Вуита
	5 years		

 Table 1: Community Stakeholder Mapping

Katwe Primary School	Children under	Infant Education	Kevina
	5 years		
Food Stall	Sells food		Kevina
Oasis Muslim School	Children under 5	Infant Education	Kevina
	years		
Diana Medical Centre		Antenatal and	Kevina
		Maternity	
Keah Medical Centre		Maternity and	Kevina
		Vaccination	
Praise God Clinic		Maternity and	Kevina
		Vaccination	
Food Stall	Sells Matooke		Kiganda
Nsambya Parents	Children under 5	Infant Education	Kiganda
	years		
Mummy Foundation	Nursery and teen	Infant Education	Kiganda
	mothers		
Top Grade	Children under 5	Infant Education	Ttawo
	years		
Infant School	Children under 5	Infant Education	Ttawo
	years		
Hollywood Market	Sells food		Ttawo

Platforms for Social Behaviour Change Communication Strategy on Nutrition/ WASH

The community has various platforms from which they access information about nutrition and WASH, these include:

Health facilities such as hospitals and medical centres are a vital source of information about nutrition and WASH. Information about nutrition and WASH is printed on large sheets of paper and placed on walls of different sections of the health facility. In addition, health workers pass on this information to the parents of the children and adolescents whenever they visit for a given service.

Large billboards strategically placed along the major roads surrounding the settlement were identified as crucial to communicating information about nutrition and WASH. Bill boards have messages reminding residents to wash their hands before and after eating food, before preparing and serving food.

However, there are several billboards promoting use of fast foods which residents say has caused poor nutrition among children and adolescents as it was mentioned by a primary caregiver and an adolescent father:

"My children do not want to eat the local food we cook at home, they want to eat chips (French fries) and chicken which we cannot afford because we are poor."

"Me and my wife are young, most of the time she does not want to cook so we eat takeaway with our son who is 2years. It is expensive but we work to get money to go and buy and to show our neighbours that we are rich. Don't you see my weight; it shows that I'm healthy."

Information is conveyed through advertisements on *Radio and Television* sponsored by the Ministry of Health, Uganda Health Marketing Group (UHMG), among others. There are specific Talk shows on Television that focus of child nutrition and health in general. Many participants mentioned programmes done by Dr. Nakakeeto a Neonatologist(Paediatrician) from Mulago

Hospital on Bukedde TV and Mwasuze Mutya by Faridah Nakazibwe on NTV. These have specific messages about healthcare, water and sanitation. CBS Radio was cited as the most popular Radio station among the residents of Katwe II, and therefore a key avenue for conveying information in this settlement. However, some residents do not want to watch educational programs they prefer watching movies and soaps.

Religious leaders were identified as very key in promoting and sustaining health practices among their congregations. Respondents reported that the words spoken to them by their religious leaders are taken as final and whole truth.

Formal/Informal Food Systems and Services

Sources of foods

Residents of Katwe II access food from both inside and outside the settlement. Majority of the residents buy food from informal markets and stalls within the settlement. Each of the eight zones in Katwe II has an informal food market. Food is sold both in raw form such as fresh vegetables, tubers among others and in already cooked form. The cooked meals are often available in the morning hours for breakfast and during lunch hours. Cooked food is mainly served to those who work within this community but live elsewhere. It was reported that once in a while residents access food from some markets outside of the settlement such as St. Balikuddembe Market. This is because food is relatively cheaper here. However, poverty was mentioned as a major cause of several nutritional problems in Katwe II. Respondents stated that poverty is responsible for poor child nutrition in this community. Furthermore, the lack of money to access nutritious food was reported to have forced some residents to buy food from street vendors on the way back home as it was recounted by one adolescent father in a Focus Group Discussion:

"I feed my child on kikomando (street roasted Tortilla with beans) every day because it was I can afford."

Common foods

The most common foods given to children in Katwe II are Posho, Matooke, Rice, Irish potatoes, Cassava, sweet potatoes, beans, ground nuts, meat, fish, silver fish. In most homes, the same food

is prepared for both children and adults. When children are about 6 months or less, their food is prepared separately but consisting of the same foods. It was occasionally mentioned that meat and fish are also served as sauce as it was said by one caregiver in a Focus Group Discussion:

"It's only Sundays or on some special days that we eat meat or fish, for the rest of the days we eat beans. Meat and fish are a bit expensive and it is not easy to find someone having them on a regular basis."

Health Services Seeking Behaviour

It was reported that there are no public health facilities in Katwe II but residents travel outside the settlement to access public medical services from Nsambya Barracks Health center and Kisenyi Health Center IV and Kiruddu General Referral Hospital. However, respondents mentioned that were private health facilities and clinics in the locality. These are often run by private individuals or companies with the aim of making a profit and offer a range of services ranging from general medical care like; antenatal care, immunization/vaccination, artificial birth-control services, among other services. It was also mentioned that the government at times partners with private health facilities to free extend health services to community, for example immunization of children under five years. through private health facilities.

Other than public and private health facilities, respondents said that traditional healers and herbalists are key health service providers in Katwe II. Most herbalists operate stalls in the informal markets within the settlement and offer a wide range of herbs which they claim to cure different diseases. Participants also postulated that the main reason why the resident opt for herbalists is that services offered by herbalists are relatively cheaper than those provided by the medical facilities, and the herbs offered by the herbalists can cure more than one ailment. Majority of the participants reported having ever consulted and used herbal remedies at least once in their lifetime.

Other sources of care mentioned included occasional health camps run in the area. The health camps run in the settlement treat various disease conditions free of charge. Although the camps target various disease conditions at the moment, they had previously focused on eye treatment and provision information on proper nutrition for children and lactating mothers.

Challenges with Access and Utilization of Health Services

Participants in FGDs felt that health facilities were costly when located within the settlement forcing residents to opt for distant but affordable options:

"We would have loved to be treated near where we stay but we don't have money. Most times you wait until you are very sick and go to Nsambya Hospital but even when you go there you just come with a paper with medicine to buy yet you have no money"

Respondents further narrated of how services at government facilities were offered free of charge or a subsidized prices attracting large numbers of people from different parts of the city resulting in long queues and crowding at health facilities. It was reported that patients at times are unable to see a health worker and leave the facility unattended. Moreover, dissatisfaction with the health facilities was expressed in the way respondents complained about the mistreatment they suffer at the hands healthcare workers especially those from public/government health facilities:

"They take their time to work on someone, and when your turn finally comes, they are not even attentive. The Nurses are rude and bark at us but I still have to go there because we don't have a better alternative."

The negative attitude of healthcare workers forces many slum dwellers to opt for other options which are often not as good. Other problems mentioned included drug stock-outs, and at public health facilities which exposing patients to unsatisfactory facility visits characterized by issuance of prescriptions of expensive drugs that need to be bought from private pharmacies.

Environmental Factors That Can Influence Potentially Adverse Exposures

Respondents narrated in FGDs and community workshop that the informal nature of the community makes living conditions suboptimal exposing residents to various nutrition and WASH vulnerabilities including poor solid and waste management and drainage systems. Participants often expressed that drainage facilities are limited, poorly maintained and are continually contaminated with feacal matter and other solid waste:

"In this community we have people from diverse backgrounds including refugees. Some people use plastic bags and dump the rubbish in the trenches especially at night."

The problem is so extensive that most people were reported to be disposing off faecal waste and dirty domestic water in the drainage channels or small compounds. Yet children were reported to play with the same dirty water drinking it at times. Sewer systems are completely lacking and cholera outbreaks are reported to occur frequently.

In the community workshop, solid waste management was reported to be poor with available garbage collection services being offered at a fee. Residents were described as undisciplined because of throwing rubbish indiscriminately anywhere. The rubbish was reported to block drainage channels that are meant to carry water in rainy seasons leading flooding issues:

"People throw rubbish wherever they find especially at night. Even the truck from KCCA stops at the main roads, they are not able to access places that are inside the settlement off the road..."

Overall, respondents reported that rubbish collection was expensive, with collectors ranging from 2000 to 6000 Shillings for a small and big sack of rubbish respectively. Specifically, respondents mentioned that residents opt to hide their rubbish only to dispose it off in improper ways. Rubbish collection companies were also not consistent in garbage collection in terms of timing for garbage collection. It was mentioned that collectors at times take a month or more without coming to collect the rubbish leaving residents with no option but to dump the rubbish in the drainage channel or burn it. Furthermore, participants felt that most homes are inaccessible for garbage collection vehicles due to road network thus only houses close to main roads have access to garbage collection.

Socio-cultural and Economic Vulnerabilities That Influence Behaviors Related to Child Nutrition

Factors Associated with Poor Nutrition

Respondents mentioned that several low income households experience food insecurity. It was reported that the quality and quantity of food consumed in households is determined by level of

income yet many households in Katwe II belong to the low income group with many unmet needs including house rent, transport, school fees, among others.

It was mentioned during FGD that majority of the households in Katwe II have between six to eight members. Most families have one meal a day which may not be solid food but maize porridge. Children too have to wait until when the family meal is served which is usually in the evening:

"I have sixteen children that I take care of, most of whom are orphans of my late siblings. In the morning I prepare warm water without sugar and serve them each with a piece of cold posho this enough for the day. In the evening I prepare either rice or posho with beans and we all eat."

It was reported that there is general lack of awareness about child health and proper nutrition. Caregivers and parents often don't know what to give the children and thus end up feeding them on mainly carbohydrates because they are readily available. It was mentioned in FGDs that due to busy schedules, parents rarely get involved in food preparation for their children. Children are left with housemaids who are often not knowledgeable about child care and nutrition:

"Most parents leave their children with housemaids or at Day care centres, and these often do not pay as much attention as the parents would."

In the community workshop, participants felt that there is a high burden of disease in Katwe II. Respondents mentioned that HIV, Tuberculosis, Diabetes and heart disease are very common. It was reported that when parents are sick they are unable to earn in order put food on the table. It was reported that there are very few residents who have pensionable jobs, so when a breadwinner falls sick then the entire households is affected:

"Sickness affects everything. It affects you as a parent and the people you have because if it is you that has been taking care of them, your people become helpless when you are down." Respondents mentioned that younger care-givers and mothers inadequately feed children because they lack experience. It was suggested that young parents should be supported by their immediate family especially their parents so that they can learn from them. It was also mentioned that the type of work a parent does affects child nutrition and health as a whole. It reported that parents especially mothers who work for long hours have little or no time for their children and the children may end up being malnourished. It was mentioned in the community workshop that fathers or men have neglected their children and their obligations in general. In Katwe II, it is the women that mainly fend for the families:

"If fathers were providing for their families as well as they should, we would definitely sit at home and take care of the children. But this is not the case, that is why you find that in many homes, the little children have been left to the care of the housemaid or caretaker who cannot provide the attention that the mother would have given."

It was reported that there are diverse religious and social backgrounds in Katwe II. It was mentioned that majority of the residents are Muslims which helps them to observe proper hygiene practices such as handwashing after visiting the toilet and before and after eating. It was however mentioned that there are some religious practices that affect child nutrition and health. For example, there are breast-feeding who also fast which makes it hard for them to have enough breast milk for the baby. It was mentioned that there are some religious leaders who discourage people from using modern medicine like vaccines for the children. It also was mentioned in the community workshop that the decision over which food is eaten is largely determined by one's income:

"I stopped eating beans because you need a lot of charcoal to cook them and charcoal is very expensive so for me I only cook food that gets ready like silver fish."

Programs and Initiatives That Shape Nutrition and WASH

Nutrition Focused Programs

Overall, it was reported that Katwe II has no single program specific to child and adolescent nutrition. Respondents clarified that nutrition-related services are mainly integrated within the general health care service delivery system mainly when pregnant mothers go for Antenatal care.

However, it was reported that government occasionally organizes meetings to teach women and mothers about breastfeeding and feeding older children. It was also reported that some zones in Katwe II are supported by the Infectious Disease Institute (IDI) which teaches people about child care including nutrition. It was also mentioned that some churches like Deliverance Church Katwe often sensitizes community members about child nutrition and health.

Coping Strategies for Child Nutrition Challenges

It was mentioned that social networks play an important role in meeting nutrition and health needs. Respondents mentioned that friends always help in time of need. Respondents narrated how they run to friends for help when they do not have food eat. and friends help in form loans to enable them to buy food or give them food. In addition, when some residents have extra money, they go to cheaper food markets and buy food in bulk which can take them through a week or more. It was also mentioned that most residents do more than one job in order to get money to buy food and medication when a child is sick. Some of the common jobs reported include washing other people's clothes and running errands for people which pays between 5,000-10,000 shillings.

WASH Services Delivery and Vulnerabilities

Water Services

It was mentioned in in the FGDs and community workshop that that water is both accessible and affordable in Katwe II. It was reported that water is drawn from either wells or from prepaid taps provided by National Water and Sewerage Corporation (NWSC). Water from the well is free but respondents mentioned that well water looks and smells contaminated because most wells are close to toilets. Water from NWSC public taps costs one Uganda Shilling per litre. It was reported that there are private taps where an individual gets a tap from NWSC connected to his home and sells to members of the community. Twenty litres of water costs 100 shillings. However, during the dry season the price of water can shoot up to 500 Uganda shillings for every 20 litres. Much as there is plenty of water in Katwe II, respondents mentioned the need to boil it before use especially water from wells and springs:

"We really have water. The water is really a lot. We shall not lie, we have water."

Faecal Waste Management

It was mentioned in FGDs that faecal waste management is one of the biggest challenges in Katwe II and a major cause of on and off sickness among residents especially children. It was reported that Katwe II has many residents compared to the number of toilet facilities available. Land lords were blamed for constructing houses with no proper toilet facilities. It was reported that one toilet is shared by many households and yet households do not want to clean the toilets thus pissing off others. Respondents narrated occasions when tenants have reported Land Lords to Local council leaders about poor toilets and no action is taken because Land lords bribe Local council leaders. When toilets fill up they need to be emptied by either a sucker or manually with a bucket. It was reported that emptying toilets is very expensive so some residents wait for the rain to come and then empty their toilets in the open. The poor condition and general lack of toilets forces residents to improvise:

"There is no toilet where I rent, I can't afford that 300/- for public toilet for each child, so now when I child says mummy I want to do pupu(defecate), I tell him/her to get a polythene, she does and then throws into the rubbish."

It was mentioned that open defaecation is a common practice in Katwe II due to shortage of toilet facilities. Some residents defecate in plastic bags and throw them in drainage channels which is commonly referred to as *"flying toilets*". This is particularly common in Base zone mainly inhabited by the Karamojong, a tribe from North Eastern Uganda who have a cultural belief that is opposed to the use of toilets. Respondents were bothered that there are no free public toilets in Katwe II. Public toilets can only be used at a fee of 300 Shillings for defecating and 500 Uganda shillings for bathing.

Type of Housing

In the community workshop, participants felt that housing poses major challenges to the residents of Katwe II especially children. Majority of the people live in temporary structures made up of wood and polyethene bags, iron sheets for walls, mud and grass. Respondents said that it is rare to find permanent houses in the settlement because of the tenure system which does not allow residents to own land. It was mentioned that the situation worsens especially in the rainy season as houses get flooded because most of the houses are not cemented:

"We live in makeshift shelters because the land is not ours and anytime KCCA can displace you. Our things get spoilt when it rains heavily and the children suffer from cough because of the cold."

Programs and Initiatives That Shape Nutrition and WASH

Child Health Days

During KIIs and FGDs participants mentioned that they were not aware of any programs and initiatives related to nutrition and WASH except the government run Child immunisation and Health Days. On such days, children below the age of 5years are brought to selected health centres for immunisation/vaccination, health education and growth monitoring among others. However, during the community workshop participants mentioned two programs: Settlement and Shelter Alternatives (SSA) which deals with improving housing and WEYONJE which means "Clean up yourself" under Kampala Capital City Authority. The community workshop helped to identify opportunities to further investigate promising approaches to advancing nutrition children in Katwe II. WEYONJE program was appraised.

WEYONJE

It was reported that the project started in 2019 and is being implemented by KCCA with funding from by Water for People, a not-for-profit organization whose area of focus is Water and Sanitation. This initiative came to address the poor sanitation situation in Katwe II. Generally, Katwe II residents use unhealthy and unsustainable ways of emptying their pit latrines-*emptying into the drainage channels*. WEYONJE offers toilet emptying services to residents with pit latrines at a very low cost. On top of pit latrine emptying, the program does training and sensitisation of community members on hygienic pit latrine maintaining practices.

Areas of Success:

- Effective sensitization using the door-to-door approach
- Community participation: A team of residents was selected to work with the local leaders in the implementation of the project. This has led to continuity and implementation goes on with or without the project staff.
- Reduction of improper pit latrine cases following identification and training of the owners.

Areas for Improvement:

• Project staff are rarely available especially when need for training and sensitization arises as one participant from the community workshop recounts:

"Whenever we call the KCCA officers, they tell us that they can only come to sensitize the community when funding from Water for People is available, and when it is not there you cannot see them.

• Overall, funding is inadequate compared to the needs of the community of Katwe II residents.

Recommendations for an ideal community intervention

Given the strengths and weaknesses of **WEYONJE** described above, participants gave recommendations for an ideal community project. The points outlined below reflect participants' suggestions:

- It should be responsive to the needs of the people while respecting the existing cultural and socio-economic set up
- The community where the project is to be implemented should be adequately prepared and encouraged participate in the project
- It should be people-centred and should actively involve residents in the design of the interventions
- It should serve the interests of the people not their (project officials) own needs
- It should create employment opportunities for members of the community where it is being implemented as this ensures continuity and increases chances for the community to like it.
- If implemented in the context of slum dwellers, it should not be used to forcefully evict the slum dwellers.

Discussion and Conclusions

This community case study sought to understand factors that contribute to poor nutrition among poor children and adolescents in Katwe II and what solutions can be used to best address their needs and the report has highlighted most of them. Overall, respondents reported that general health situation in Katwe II is worrying due to flooding high influx of refugees, ignorance about proper, teenage pregancy among others. There are various platfrorms from which residents access information about nutrition and WASH in Katwe II, these include: Health centeres, Radio and Televison, Billboards and Religious Institutions among others.

Key actors involved in child and adolescent nutrition/WASH identified were categorised as Institutional (Daycare centers,Kindergatens and Nursery Schools and Health facilities) and Organizational (Child Eye Foundation, NUTRAC, Shelter and Settlement Alternatives (SSA) and IDI. Much as there are a number of health services providers, residents of Katwe II have limited or no access to public health services forcing them to move long distances in search for free health care.

Residents of Katwe II are exposed to dangerous environmental exposures ranging from lack of enough toilets, poor drainage systems and lack of solid waste disposal services. However, residents of Katwe II have no water access problems.

Despite not having specific child or adolescent nutrition programs, the settlement has various platforms and channels through which they are informed about nutrition, WASH and health in general. These include: health facilities, billboards, Radio and Television and religious Instituttions.

Socio-economic vulnerabilities such as mothers/caregiver age, type of work, gender and income levels influence child nutrition and health in general. There are various WASH-related interventions going in in the settlement of which WEYONJE was identified as an ideal community intervention. By looking at WEYONJE, residents shared their thoughts of what an ideal community intervention for their setting would look like.

References

• Save the Children. (2012). Voices from urban Africa: The impact of urban growth on children. Retrieved from http://www.savethechildren.org/atf/cf/%7B9def2ebe-10ae-432c-

9bd0-df91d2eba74a%7D/SAVETHECHILDREN-VOICESFROMURBANAFRICA-SUMMARY2012.PDF. Accessed 5.1.2017

- Prüss-Ustün, A., et al. (2014). Burden of disease from inadequate water, sanitation and hygiene in low- and middle-income settings: a retrospective analysis of data from 145 countries. Tropical Medicine and International Health, 19(8), 894-905.
- Frayne, B., et al. (2010). The state of urban food insecurity in Southern Africa. Urban Food Security Series No. 2. Queen's University and African Food Security Urban Network. Kingston and Cape Town.
- Uganda Demographic and Health Survey (2011). Kampala, Uganda: UBOS and Calverton, Maryland: ICF International Inc.