



What is household food security in Kisangani City, DR Congo? (A right to food approach)

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Abstract

A transversal descriptive study was organized in June 2019 in the city of Kisangani. A sample of households was obtained by the formula of Fink Arlene and Jacqueline Kosecoff, after adjusting for population size, sample design effect and response rate, a sample of 720 households were obtained. According to the selection criteria, a final sample is 670 households. It was used to analyze the food security of households living in Kisangani, in a right to food approach.

The results show that 74.6% of household heads know the composition of food and 86.4% of heads of households do not know the right to food. To solve this problem, the provincial government must develop an effective communication policy that will mobilize poor households to grow, breed and fish agro-pastoral products.

Keywords: food, right to food, households, kisangani, drc.

Introduction

As proclaimed in Article 25 of the Universal Declaration of Human Rights Human Rights: A life with dignity requires that "everyone has the right standard of living adequate for health, well-being and well-being of his family, especially for food, clothing and housing ^[1]. Food security, an integral part of the security of life, is considered to be a fundamental right of every human being to have access at all times to food of sufficient quantity and quality to lead an active and healthy life ^[1,2]. Human health usually depends on the health of its cells.

For a man to enjoy better health, his cells must function effectively in all their abilities. For this, man needs nutrients necessary for their reconstruction, protection and source of energy. Nutrients are essential substances that humans only find in their diet ^[3,4]. Also, the man does not have the daily food necessary for their health. This unfortunate situation is caused by natural disasters, wars and lack of adequate agricultural policy. The food shortage can quickly raise food prices to markets. And this price increase will push the poor to no longer have easy access to their food of choice because the poor do not have enough money to buy their food ^[3-6].

This poverty is both the cause and the consequence of the food crisis which has many devastating consequences: weakening of the human immune system and worsening of diseases ^[7]. Currently, several authors classify poverty as one of the forms of exclusion ^[8]. In our study, poverty is considered a complex, multi-dimensional phenomenon; it can not be reduced to its mere monetary expression (that is to say, to an insufficient level of economic resources to lead a better life) but it is also material, cultural and especially educational ^[9].

Worldwide, more than 852 million people are undernourished (815 million are in developing countries, 28 million in countries in transition and 9 million in industrialized countries) ^[10]; women make up 70% of this total. And about 30 million children are born

vulnerable each year because of poor fetal nutrition ^[11]. On our planet, 1 billion 36 million people do not have access to drinking water ^[12]. This results in 4 billion annual cases of diarrhea with a correlation of 2.2 million child deaths ^[13]. More than 62 million people, including 6 million children or 1 child every 5 seconds, die each year from the pernicious consequences ^[14] of diseases inextricably linked to hunger ^[15].

During International Literacy Day (JIA, 2017 edition), celebrated on September 8 at the SULTANI Hotel in Kinshasa; the government of the DRC has recognized that illiteracy is alarming: the illiteracy rate in the DRC is estimated at 27.1%, of which 13% of women and 14% of men [16] and is one of its majors concerns. Illiteracy is greater in the mining areas and in repeated armed conflicts, such as the town of Kisangani where the population continues to arrive because of social insecurity in its neighboring cities ^[17].

Food security is more of a political than a legal concept, since it requires respect, protection and implementation of the right to food. The right to food or the right to food ^[18], as any fundamental human right ^[19-21] is inherent in human dignity ^[22] and classified as economic, social and cultural rights (ESCR) which has been a legal and humanitarian concept since 1948. The right to food has recently and progressively been imposed in contemporary positive human rights law ^[23]. These two notions are concrete and general reminders of the idea that each individual must have the necessary food at all times to live in nutritional conditions.

This policy aims to free every man from the claws and anguish of hunger ^[24], in order to allow each individual, through an adequate diet, to develop fully and to maintain his physical and mental capacities ^[25]. International commitments to reduce poverty and malnutrition, as reflected in, inter alia, the Millennium Declaration of 2000 and the Final Acts of the 1996 and 2002 World Food Summits ^[26] report the magnitude of the world's food

situation and the content of international ambitions in the struggle to eradicate hunger.

In this study, we will focus on the town of Kisangani in the province of Tshopo where the population (the displaced wars) continues to arrive without any resources because of the wars waged by the armed militia groups that are in search of gold, diamond, coltan in surrounding villages and towns of Kisangani. In a right to food approach, the aim of this study is to assess the level of knowledge of food and the enjoyment of human rights in the diet of households living in Kisangani.

Study Area and Method

Study area

This investigation was organized in June of 2019, in the city of Kisangani, Tshopo Province, Democratic Republic of Congo (Fig. 1).

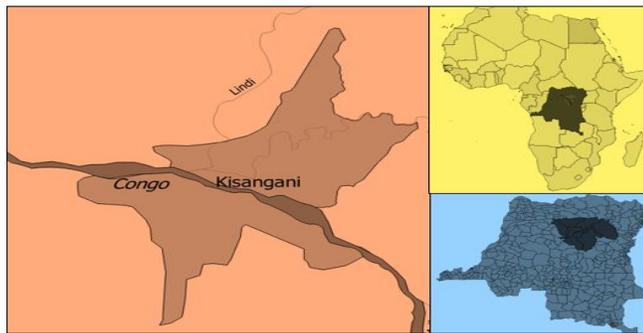


Fig 1: Location of Kisangani City in the province of the Tshopo, DRC.

The number of households in the city of Kisangani is increasing anarchically from one year to the next. This increase is caused by wars in neighboring villages and towns of Kisangani. As the population is insecure, it abandons all their agro-pastoral production activities and goes into exile in Kisangani, where currently no industry or big capital enterprise is operating efficiently. This leads to widespread poverty among the population and great difficulty in finding their food.

Size of the sampling

Our investigation examines households living in the city of Kisangani and, it is based on their problem of knowledge and enjoyment of the right to food of households living in Kisangani. Selection criteria: inclusion criteria, any household composed of at least one child and resident in Kisangani for more than two years and exclusion criteria: any household without children, any nomadic household or homeless and all household under housed. Fink Arlene Jacqueline Kosecoff's formula was used to calculate the minimum sample size with an estimated proportion, *p*, for a simple random sample (93.1% response rate).

$$n \geq \frac{Z^2 * p * (1 - p)}{\delta^2}$$

Or

n: minimum sample size

Z: standard score of the confidence level

δ: margin of error

p: probability for a household presents a given property.

With a confidence level set at 95% and an error level of 5%, considering "the consumption criterion of US \$ 1 per person per day" [27].

Table I shows the distribution of households in the two selected neighborhoods according to the proportionality factor of households in a cluster in relation to the total of households of the sample size to be surveyed by stratum and the survey rate.

Table 1: Distribution of household size according to two selected districts

Neighborhoods	N _H	A _H	N _H	F _H = N _H / N _H
Stade	1206	0.54	390	0.32
Zoo	1022	0.46	330	0.32
Total	2228	1.00	720	0.32

Or

N_h = Size of households in a cluster.

a_h = Proportionality factor of households in a cluster compared to the total of households.

n_h = Sample size to investigate by cluster.

f_h = The survey rate

The theoretical size of the sample is first modified and then adjusted taking into account population size, design effect and response rate. In our study, we expected a response rate of 100%. So, the final size of our study sample is 720 households.

The simple random sampling method allows us to determine our simple method, by successive draw of 1 commune, 2 districts, 14 avenues by districts, 720 parcels by 14 avenues and 720 households by 720 parcels. This technique allowed us to analyze the results according to different variables of the sample.

We performed a technique of drawing in 5-degree clusters:

In the first degree, we drawn by lot of 1 commune in 6 communes of Kisangani.

In the second degree, we drawn by lot of 2 districts in this commune.

At the third degree, we drawn by lot of 14 streets in these 2 districts.

At fourth degree, we drew 720 parcels in 14 streets.

The fifth degree, we chose systematically 720 households in 720 parcels.

Since we do not have a sampling frame of households, we decided to take any household located on the site with regard to our criterion which is not random, but which is supposed to us independent of the studied phenomenon [29]. To determine the number of households to be surveyed by district, we used the rule of three simple:

a. Stade District: 2228/1206 = 720 / x = 720 x 1206 / 2228 = 390 parcels

b. Zoo District: 2228/1022 = 720 / x = 720 x 1022/2228 = 330 parcels

Knowing that in each parcel, we had to investigate one and only one household, of this cumulated 720 parcels, we had 720 households to investigate.

Type of survey

Our study is descriptive transversal.

Parameters of survey

- Level of education of the woman in the household

- Level of education of household head
- Food knowledge
- quality of food
- Knowledge of the right to food
- Food punishment
- Accessibility to food

Data analysis

We used computerized tabulation after encoding all survey data into IBM SPSS 20 software. Content analysis is done by their interpretation after categorization. And the results were grouped together in the different tables to which we had calculated the percentage.

Results and Discussion

The analysis of our study brought together two essential points:

- Cognitive characteristics of foods and the right to food.
- Characteristics of the enjoyment of the right to food

Total results of the data

Table II gives the distribution of households according to a total of selection criteria of our study. That is a participation rate of 93.1%.

Table 2: Distribution of households according to selection criteria

Selection Criteria	Districts				Total	
	Stade		Zoo		Effective	%
	Effective	%	Effective	%		
Yes	374	95.9	296	89.7	670	93.1
No	16	4.1	34	10.3	50.	6.9
Total	390	100.0	330	100.0	720	100.0

Table II data indicate that 93.1% of households responded positively to the selection criteria and participated in the survey. 6.7% of households were excluded from our study.

Cognitive characteristics of foods and the right to food

Table III gives the distribution of households according to the level of education of the woman in the household.

Table 3: Distribution of households by level of education of the woman in the household

Level of education	Effective	%
No level	231	34.5
Primary	196	29.2
Secondary	213	31.8
University	30	4.5
Total	670	100.0

From the education level of woman in the households surveyed, reading the data in Table III indicates that 34.5% of women do not know how to read, write or correctly count; 31.8% are at secondary level; 29.3% are at primary level and 4.5% at the university level. The data in Figure 2 show the division of households according to the education of the woman in the household by district.

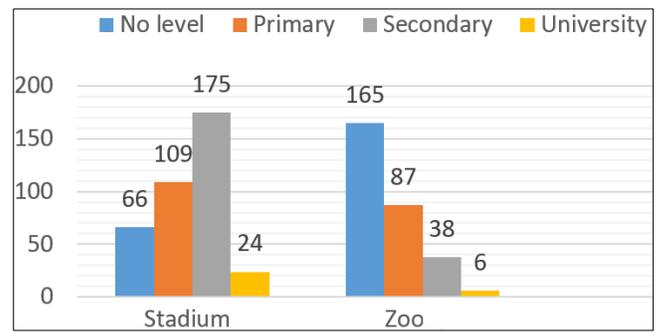


Fig 2: Distribution of households according to the education of the woman in the household in each district

The results in Figure 2 show that women in rural areas (Zoo) are more illiterate than those in urban areas (Stade) with respectively 17.6% and 55.7%. Thus, it is observed that university women live more in urban than in rural areas with 6.4% and 2.1% respectively. In the MISC2 final report, it is observed that the illiteracy rate in rural areas is higher than in urban areas (40% versus 14%) [30]. The difference between these two results is explained by the series of wars that are happening in eastern DRC and the eminence of the Ebola epidemic. Kisangani has become a city of asylum. Households arrive in extreme poverty. And also university women do not live in rural areas because of the precariousness of life.

The data in Table IV give the classification of households according to the level of education of the head of the household.

Table 4: Distribution of households according to level of education of the head of household

Level of education	Effective	%
No level	82	12.2
Primary	296	44.2
Secondary	253	37.8
University	39	5.8
Total	670	100.0

The table results show that the heads of majority households are at the primary level (44.2%), followed by those at the secondary level (37.8%), followed by the non-proficient (12.2%) and few are the academics (5.8%). These results are close to those of MISC2, which gives 32% of people who can neither read nor write [33]. The primary level of our study can easily explain the effort that the Congolese government provides for school promotion. The data in Table V show the classification of households based on knowledge of the knowledge of food in human health by household woman.

Table 5: Distribution of households according to the knowledge of food in human health

Food knowledge	Effective	%
Yes	500	74.6
No	170	25.4
Total	670	100.0

Reading Table V data shows that 74.6% of households know the composition of food and only 25.4% of households do not know this. The level of education greatly influences household heads in the choice of quality foods [30].

The data in Figure 3 show the distribution of households according to food quality by household woman.



Fig 3: Distribution of households according to food quality of food

Characteristics of the enjoyment of the right to food

The data in Table VI show the distribution of households according to the knowledge of the right to food by the head of the household.

Table 4: Distribution of households according to knowledge of the right to food.

Knowledge of the right to food	Effective	%
Yes	91	13,6
No	579	86,4
Total	670	100,0

Based on the data in the table above, it is clear that 86.4% of households did not know the right to food and only 13.6% of households are aware of this right. The war-related poverty that the eastern DRC is experiencing, despite the demands of custom and religion, makes people believe that food insecurity is inevitable, everything is the will of God [34].

The data in Figure 4 describe the division of households according to the practice of exclusive breastfeeding.



Fig 4: Distribution of households according to the exclusive breastfeeding practice

Based on the data in the figure above, it is shown that 51.3% of women in the household practice exclusive breastfeeding against 48.7% who do not practice it. According to WHO and UNICEF recommendations to which the DRC has subscribed: all children should exclusively breastfeed for up to six months. But the practice of exclusive breastfeeding is not yet common in the DRC. The results of the Demographic and Health Survey show that only 36% of children under 6 months are breastfed exclusively for up to 6 months [31]. This practice is now more accepted because of poverty caused by wars.

In addition, another survey conducted by OLEKO WA OLEKO in 2017 in Kisangani City obtained the same results as those in this study (51.4%) of children were breastfed exclusively for up to 6 months [32]. The results of the Mali MISC 2015 survey indicate that 33% of children under 6 months of age were exclusively breastfed in 2015 [32].

The data in Figure 5 show the distribution of households according to the practice of food punishment of children and pregnant women.



Fig 5: Distribution of households according to the practice of food punishment

Regarding the food penalty imposed on children and pregnant women, it follows from reading the data in Figure 4 that 86.1% of households do not practice food punishment and only 13.9% of households accept this practice to children and pregnant women. Food punishment is decreasing because of poverty. We can not punish or forbid something that does not exist. In this context, poverty is defined as a multidimensional phenomenon that requires integrated multisectoral solutions [35].

The data in Table VII gives the distribution of households according to the accessibility of adequate food.

Table 7: Distribution of households according to the accessibility of adequate food.

Accessibility of adequate foods	Effective	%
Difficult	548	81.8
Easy	122	18.2
Total	670	100.0

As shown in Table VI, the distribution of households according to the availability of adequate food is 18.2% of households that have easy access to the foods of their choice, and the majority 81.8% of households. households have difficult access to food, as a result, these households live in chronic food insecurity caused by the repetition of wars in eastern DRC. Food insecurity is widespread in any country in the Congo, so a survey conducted

in the central DRC in Tshumbe in Sankuru province also yielded similar results with 80% of households in Tshumbe living in food insecurity. chronicle in January 2018 for various reasons [36,37].

Conclusion

This household food security study in the city of Kisangani is addressed in a right to food approach. The series of wars in Eastern Democratic Republic of Congo has been going on for more than 20 years and continues to drag many displaced people from wars and EBOLA epidemics who walk on foot for months until Kisangani. These displaced wars arrive in Kisangani without any resources and do not receive any humanitarian assistance from Congolese government or international NGOs. They live in great poverty.

The results of this study show that 86.4% of household heads in Kisangani are familiar with the food composition, but the poverty caused by wars makes them vulnerable to the purchasing power of food. And only 13.6% of Kisangani household heads know the right to food and the 86.4% of heads of households in Kisangani who ignore the right to food, they believe that food insecurity is inevitable (It is the will of God, the human being can not change anything).

To solve this problem of food insecurity, the provincial government of Tshopo is advised to organize sensitization sessions of displaced wars in their neighborhoods, to teach them how to cultivate, to raise livestock and to fish as happened in the time before independence. The media is essential for awakening collective consciousness.

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