Public Knowledge, Perceptions, Responses and Effects Related to the COVID-19 Health Emergency: The Case of Kenya

International Center for Agricultural Competitiveness
Texas Tech University
BP-02-20

Dr. Carlos Carpio
Dr. Darren Hudson
Oscar Sarasty
Department of Agricultural and Applied Economics
Texas Tech University
Lubbock, Texas
Dr. Anthony Macharia
Egerton University, Kenya
Dr. Mumina Shibia
Kenya Agricultural and Livestock Research Organization, Kenya

Contact: Dr. Carlos E. Carpio, **carlos.carpio@ttu.edu**, Tel: 1-806-252-6491.

Methodology

The survey about the COVID-19 health emergency in Kenya was designed and analyzed by applied economics researchers from several government and academic institutions from the United States and Kenya, led by a team at Texas Tech University. Online data collection was carried out from April 7 to April 14, 2020 from a representative sample of 1065 Kenyan households by the company Qualtrics. The survey targeted household heads 18 years and older.

The survey was designed to match the distribution of household size estimated by the 2014 Kenya Demographic and Health Survey[1] and the income distribution estimated in 2018 by Ipsos Public Affairs[2] supplemented with the 2019 Economic Survey[3] . The sample was also weighted to balance the sample characteristics to be consistent with age and regional distributions estimated by the 2019 Kenya Population and Housing Census.[4] The survey margin of error (for simple proportions) is approximately plus and minus 3 percentual points. The survey collected data about household characteristics, general knowledge about the disease, support for public institutions, availability and trust in information about the disease, level of preparedness for emergencies, behavioral changes, and economic impact of the health emergency.

Texas Tech University covered all the expenses related to data collection.

General notes for the reading of the report:

- Percentage may not add up to 100% due to rounding.
- The questions are presented in the same sequence they were asked.
- All the data presented comes from the survey.

Funding for this project was provided by Texas Tech University.[5]

[1] https://dhsprogram.com/pubs/pdf/FR308/FR308.pdf
[2] https://www.ipsos.com/sites/default/files/ct/news/documents/2019-08/ipsoske_spec_1st_release_presentation_pa_v1.pdf
[3] https://www.knbs.or.ke/?wpdmpro=economic-survey-2019
[4] https://www.knbs.or.ke/?wpdmpro=2019-kenya-population-and-housing-census-volume-iii-distribution-of-population-by-age-sex-and-administrative-units
[5] Funding was provided by the Larry Combest Endowed Chair for Agricultural Competitiveness, Texas Tech University.

Q1 Which of the following practices are recommended or not recommended by health experts to reduce the spread of the coronavirus?

	Recommended	Not recommended	I don't know
Frequent hand washing	97.9%	2.1%	0.0%
Use of facemask by heathy individuals in public places	92.9%	6.9%	0.2%
Avoid gatherings with large number of people	97.5%	2.1%	0.4%
Staying home if you are feeling sick	75.1%	22.1%	2.8%
Taking hot baths	33.3%	42.5%	24.2%

Q2 Is each of the following a way that coronavirus is transmitted, or not?

	Yes	No	I don't know
Being in close physical proximity with someone that is infected	96.2%	1.5%	2.3%
Touching surfaces that contain body fluids of someone infected	95.0%	2.6%	2.4%
Mosquito bites	5.4%	81.4%	13.2%
Consume contaminated food	33.5%	49.3%	17.2%

Q3 Are these symptoms related to coronavirus?

	Yes	No	I don't know
Fever	97.7%	0.2%	2.1%
Dry cough	95.0%	1.2%	3.8%
Nasal congestion	76.3%	13.3%	10.4%
Rash	15.5%	66.4%	18.1%
Body ache and pain	76.5%	16.9%	6.6%
Diarrhea	28.2%	58.9%	12.9%

Q4 Which of the following groups of individuals have high vulnerability or low vulnerability of developing serious medical conditions if they become infected with the coronavirus?

	High risk	Low risk	I don't know
Kids (less than 12 years)	50.6%	40.5%	8.9%
Teenagers (between 12 and 17 years)	18.8%	78.3%	2.9%
Adults between 18-59 years	41.8%	56.3%	1.9%
Adults over the age of 60	92.7%	6.5%	0.8%
People with preexisting health conditions (heart diseases, diabetes, cancer, lung diseases)	96.1%	3.2%	0.7%
People in a good health condition	13.9%	82.6%	3.5%

Q5 If you think you are having symptoms of coronavirus, should you?

	Recommended	Not recommended	I don't know
Stay at home	71.6%	25.6%	2.8%
Call a doctor or health expert	95.7%	2.0%	2.3%
Go immediately to a hospital or health center	78.9%	18.4%	2.7%

Q6 Which of the following have you done in response to the coronavirus health emergency?

	Yes	No	I don't know
Use facemask	88.4%	9.5%	2.1%
Use alcohol gel and wash hands frequently	96.9%	3.1%	0.0%
Purchased medicines	17.7%	79.4%	2.9%
Unscheduled and extra purchases of food	61.2%	35.2%	0.6%
Stay at home (except for mandatory activities)	94.1%	3.7%	2.2%
Reduce/cancel social activities	93.5%	6.3%	0.2%

Q7 During / Due to the coronavirus health emergency, you or members of your household:

	Yes	No	I don't know
Have experienced lost or reduction of income?	92.3%	7.4%	0.3%
Have lost your job?	56.6%	41.0%	2.4%
Were able to open your business normally?	17.9%	81.5%	0.6%
Were able to pay your house rent?	39.7%	57.2%	3.1%
Were able to purchase food products normally?	34.2%	65.6%	0.2%
Were able to buy facemasks, alcohol gel and medicine?	70.4%	27.2%	2.4%
Have missed classes on elementary school, high school or college?	80.2%	19.0%	0.8%
Have experienced stress or anxiety?	81.9%	14.8%	3.3%
Have experienced sadness or depression?	74.4%	21.7%	3.9%

Q8 What do you consider is your probability of contracting the coronavirus?

Lower bound	Upper bound	Mean	Standard deviation
0.00	100.00	30.30	1.30

Bins	Lower bound (%)	Upper bound (%)	Frequency	Cumulative frequency
1	0.00	20.00	46.8%	46.8%
2	21.00	40.00	19.4%	66.2%
3	41.00	60.00	22.9%	89.1%
4	61.00	80.00	6.5%	95.6%
5	81.00	100.00	4.4%	100.0%

Q9 What do you consider is your probability of being hospitalized in case of contracting the coronavirus?

Lower bound	Upper bound	Mean	Standard deviation
0.00	100.00	45.5	1.7

Bins	Lower bound (%)	Upper bound (%)	Frequency	Cumulative frequency
1	0.00	20.00	32.4%	32.4%
2	21.00	40.00	17.4%	49.8%
3	41.00	60.00	16.4%	66.2%
4	61.00	80.00	12.9%	79.1%
5	81.00	100.00	20.9%	100.0%

Q10 What do you consider is the mortality rate in case of contracting the coronavirus? (Percentage of people who die if they contract the disease)

Lower bound	Upper bound	Mean	Standard deviation
0.00	100.00	18.1%	0.8

Bins	Lower bound (%)	Upper bound (%)	Frequency	Cumulative frequency
1	0.00	10.00	45.7%	45.7%
2	11.00	20.00	20.2%	65.9%
3	21.00	30.00	15.4%	81.3%
4	31.00	40.00	8.0%	89.3%
5	41.00	50.00	10.7%	100.0%

Q11 Do you have a money set aside for emergencies?

	Frequency	Cumulative frequency
Yes	36.5%	36.5%
No	63.5%	100.0%

Q12 If Yes, how much money do you have saved for emergencies in KES?

Lower bound (KES)	Upper bound (KES)	Mean	Standard deviation
0.00	100,000.00	13,937.0	2,154.3

Bins	Lower bound (KES)	Upper bound (KES)	Frequency	Cumulative frequency
1	0.00	20,000.00	81.1%	81.1%
2	20,001.00	40,000.00	9.4%	90.5%
3	40,001.00	60,000.00	3.3%	93.8%
4	60,001.00	80,000.00	2.9%	96.7%
5	80,001.00	100,000.00	3.3%	100.0%

Q13 How would you rate the work of the following organizations during the health emergency:

	Very good	Good	Neutral	Bad	Very bad	I don't know
Presidency	34.0%	35.1%	17.4%	6.8%	6.3%	0.4%
National Emergency Coronavirus Response Committee	42.1%	37.7%	10.9%	4.2%	4.7%	0.4%
County Coronavirus Emergency Response Committee	20.5%	38.4%	22.8%	11.1%	6.7%	0.5%
Ministry of Health	53.6%	31.5%	8.3%	3.9%	0.6%	2.1%
Ministry of Labor	8.3%	31.4%	27.3%	22.0%	8.8%	2.2%
The National Treasury and Planning	17.5%	28.3%	28.2%	16.3%	7.8%	1.9%
The Central Bank of Kenya	22.7%	34.9%	25.1%	10.1%	5.9%	1.3%
Kenya Airports Authority	11.5%	28.7%	21.8%	21.7%	14.7%	1.6%
The National Transport Safety Authority (NTSA)	14.3%	35.5%	24.9%	16.0%	6.2%	3.1%
Kenya Ferry Services	11.9%	33.7%	26.3%	15.1%	6.2%	6.8%
The National Police Service	11.1%	21.3%	23.5%	20.2%	23.4%	0.5%
Ministry of Education	23.8%	39.5%	21.2%	8.2%	6.2%	1.1%
Kenya Private Sector Alliance (KEPSA)	8.8%	39.1%	35.0%	8.3%	4.3%	4.5%
World Health Organization (WHO)	48.5%	35.1%	8.9%	1.2%	3.6%	2.7%
NGOs/Foundations/Civil Society Organizations	25.8%	38.7%	25.1%	4.4%	4.3%	1.7%

Q14 Right now, how worried are you about/that…

	Very worried	Somewhat Worried	A little bit worried	Not too worried	Not worried at all	I don't know
You or someone in your household will get sick from the coronavirus	60.7%	16.5%	11.4%	6.8%	4.4%	0.2%
You will not get access to virus testing	47.2%	24.4%	14.0%	6.9%	6.9%	0.6%
You will not be able to access or afford treatment for COVID-19	66.5%	13.0%	7.7%	5.0%	6.2%	1.6%
You will lose income due to a workplace closure or reduced hours	75.3%	11.5%	3.6%	4.8%	2.6%	2.2%
You will lose your job	68.8%	12.9%	5.0%	4.2%	6.9%	2.2%
You will have unexpected expenses	72.2%	16.5%	4.3%	5.5%	1.3%	0.2%
Curfew	47.1%	22.4%	13.4%	9.5%	7.4%	0.2%
Mobilization/Transportation problems	59.1%	20.6%	8.3%	8.1%	3.7%	0.2%
You will not be able to get food	67.7%	16.8%	7.1%	5.4%	2.8%	0.2%
Increase in the price of food	77.2%	12.4%	5.4%	1.7%	3.2%	0.1%
There will be long-term economic recession or depression	77.3%	13.5%	3.1%	1.9%	1.9%	2.3%
You will lose some or most of your retirement/savings	60.9%	17.2%	5.9%	4.6%	5.3%	6.1%

Q15 Do you consider there is enough information with respect to the coronavirus?

	Frequency	Cumulative frequency
Yes	64.7%	64.7%
No	30.4%	95.1%
I don’t know	4.9%	100.0%

Q16 How much do you trust the following sources to provide reliable information on coronavirus?

	Trust a great deal	Trust a fair amount	Neutral	Don't trust much	Don't trust at all	I don't know
Television	49.3%	37.7%	7.3%	2.7%	0.7%	2.3%
Newspaper (Printed or online)	33.5%	41.7%	15.8%	4.7%	3.1%	1.2%
Radio	45.6%	33.0%	14.0%	3.8%	0.4%	3.2%
Social Media (Facebook, Instagram and Twitter)	13.3%	32.3%	22.4%	23.9%	6.0%	2.1%
WhatsApp	12.5%	27.2%	26.6%	22.0%	9.2%	2.5%
Government	43.3%	31.0%	13.9%	6.4%	5.4%	0.0%
Medical doctor	62.4%	26.6%	7.1%	1.2%	2.7%	0.0%
Religious organizations (e.g. churches, mosque, etc.)	23.8%	33.5%	27.3%	9.3%	5.8%	0.3%

Q17 Which of the following sources have you used to obtain information about the coronavirus? (you can choose more than one)

	Frequency
Television	93.5%
Newspaper (Printed or online)	62.6%
Radio	74.2%
Government sources	74.3%
Social Media (Facebook, Instagram and Twitter)	72.2%
WhatsApp	60.5%
Friends and family	58.9%
Coworkers/Classmates	38.8%
Medical doctor	81.9%
Religious organizations (e.g. churches, mosque, etc.)	28.7%
Other	2.5%

Q18 BEFORE the health emergency produced by the coronavirus, based on the amount of nonperishable food you had at home, how long could you have gone without needing to go to the store?

	Frequency	Cumulative frequency
0 days	3.1%	3.1%
1 day	14.7%	17.8%
2 days	16.4%	34.2%
3 days	16.0%	50.2%
4 to7 days	29.5%	79.7%
More than 7 days	18.5%	98.2%
I don’t know	1.8%	100.0%

Q19 AFTER the health emergency produced by the coronavirus, based on the amount of nonperishable food you had at home, how long could you go without needing to go to the store?

	Frequency	Cumulative frequency
0 days	3.3%	3.3%
1 day	13.6%	%
2 days	11.9%	%
3 days	11.6%	%
4 to7 days	33.7%	%
More than 7 days	23.8%	%
I don't know	2.0%	100.0%

Q20 How much was your monthly home food expenditures BEFORE the health emergency produced by the coronavirus in KES?

Lower bound (KES)	Upper bound (KES)	Mean	Standard deviation
0.00	100,000.00	15,767.0	826.1

Bins	Lower bound (KES)	Upper bound (KES)	Frequency	Cumulative frequency
1	0.00	20,000.00	71.3%	71.3%
2	20,001.00	40,000.00	21.2%	92.5%
3	40,001.00	60,000.00	5.9%	98.4%
4	60,001.00	80,000.00	1.1%	99.5%
5	80,001.00	100,000.00	0.5%	100.0%

Q21 How much ADDITIONAL money have you spent since the health emergency produced by the coronavirus started to increase the amount of food available at home in KES?

Lower bound (KES)	Upper bound (KES)	Mean	Standard deviation
0.00	100,000.00	18,114.0	1530.7

Bins	Lower bound (KES)	Upper bound (KES)	Frequency	Cumulative frequency
1	0.00	20,000.00	70.8%	70.8%
2	20,001.00	40,000.00	16.9%	87.7%
3	40,001.00	60,000.00	7.1%	94.8%
4	60,001.00	80,000.00	4.6%	99.4%
5	80,001.00	100,000.00	0.6%	100.0%

Q22 For how long do you think YOU and YOUR FAMILY would be able to live the present way of life under the current government regulations due to the health emergency (total curfew at night, local and domestic travel restrictions, stay-home orders, closure of nonessential businesses)?

	Frequency	Cumulative frequency
One week	21.6%	21.6%
Two weeks	17.9%	39.5%
Three to four weeks	26.7%	66.2%
Between 2 to 3 months	11.9%	78.1%
Between 4 to 6 months	2.3%	80.4%
For whatever time it takes to control the spread of the virus	13.1%	93.5%
It should not be any restrictions	0.2%	93.7%
I don't know	6.3%	100.0%

Q23 For how long YOU think the health emergency would continue?

	Frequency	Cumulative frequency
Less than one month	7.7%	7.7%
1 to 3 months	47.1%	54.8%
4 to 6 months	18.2%	73.0%
7 to 9 months	4.4%	77.4%
10 to 12 months	4.7%	82.1%
More than 12 months	5.8%	87.9%
I don't know	12.1%	100.0%

Q24 Please indicate your level of agreement or disagreement with the following statements:

	Totally agree	Agree	Doesn't agree or disagree	Disagree	Totally disagree	I don't know
Saving lives is most important than saving the economy	76.6%	17.7%	1.7%	1.1%	2.6%	0.2%
I am willing to risk my life to avoid causing damage to the economy	13.7%	10.3%	14.9%	29.6%	30.9%	0.6%
I would rather contract the virus than stay at home and die of hunger	10.7%	12.6%	12.3%	30.3%	33.5%	0.4%
The government should be able to limit our movements to control the virus	55.4%	32.3%	7.0%	2.1%	0.7%	2.5%
God will protect the people, so I don't care about the virus	8.4%	12.0%	18.3%	29.8%	30.6%	0.8%

Q25 What percentage of your household income would be reduced due to the health emergency?

Lower bound	Upper bound	Mean	Standard deviation of the mean
0.00	100.00	48.4	1.5

Bins	Lower bound (%)	Upper bound (%)	Frequency	Cumulative frequency
1	0.00	20.00	23.5%	23.5%
2	21.00	40.00	25.5%	49.0%
3	41.00	60.00	19.7%	68.7%
4	61.00	80.00	18.2%	86.9%
5	81.00	100.00	13.1%	100.0%

Appendix

Income distribution coronavirus survey (2020)

Bins	Lower bound (KES)	Upper bound (KES)	Frequency	Cumulative frequency
1	0.0	3000.0	21.3%	21.3%
2	3,001.0	6,000.0	12.7%	34.0%
3	6,001.0	8,000.0	7.3%	41.3%
4	8,001.0	10,000.0	11.6%	52.9%
5	10,001.0	17,000.0	17.6%	70.5%
6	17,001.0	25,000.0	10.9%	81.4%
7	25,001.0	40,000.0	8.9%	90.3%
8	40,001.0	More than 40,001.0	9.7%	100.0%