

Impact of COVID-19 on Food Security in the Caribbean

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Abstract The COVID-19 pandemic has shaken the globe and remains a threat to the food and nutrition security of vulnerable communities due to the disruptions of the food system. This study assessed the impact of COVID-19 on food and nutrition security at the household level in eight Caribbean countries. The findings revealed that 16% of households reported that their diet was suboptimal during the crisis; among the households severely affected, rice and egg consumption increased whereas the utilization of meats, fish, chicken, vegetables, and fruit intake declined; 40% of households experienced some form of hunger and 42% of them reported that they were moderately to severely affected. As countries aim to recover and regain stability, households remain at risk and the situation on the ground may worsen and therefore the findings of this study may be modest. As such, food security should be an integral part of the policy framework to address immediate needs and the imperatives for long-term resilience.

Keywords: COVID-19, food security, nutrition, policy, Caribbean

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1. Introduction

There is much apprehension surrounding the resilience of food systems and the added burden that crises might place on existing hunger, poverty, and nutrition-related diseases. The COVID pandemic is affecting all four pillars of food security: availability (adequate supply), access (the physical and economic means to obtain food), utilization (quality of nutritional intake), and stability (consistent access to sufficient food that is affordable, nutritious, safe and preferred). As such, there is mounting demand for priority to be given to food security and population nutrition during the COVID-19 pandemic and beyond to safeguard the current and future health and well-being of all people.

The disruptions in economic activity have given rise to unemployment and loss of income. When income-earning capacities and purchasing power of households are diminished they are forced to switch to cheaper, less nutritious foods. Some members of the household may have to sacrifice eating to allow food items to stretch and to make ends meet. Food access is made more difficult by changes in the supply market as the downturn in export earnings and consequential currency depreciation result in more expensive imports and therefore higher food prices. Loss of fiscal revenue can lead to suspension of social programs and safety nets or cuts in the health budget, with probable negative implications for food security and long-term consequences for development.

While strict control measures are necessary, they pose disruptions to food production and supply chains. Infection containment is a priority to preserve health, but the livelihoods and food security-related impacts cannot be ignored. This global health emergency underlines the importance of continuous food security analyses. Not only are the availability of food and one's access to it a fundamental human right, but these are also important indicators of poverty. Given the Caribbean's unique vulnerabilities as net importers of food, it is crucial to remain abreast of changes in the global food system. Therefore, this study assessed the impact of COVID-19 on food security and nutrition among Caribbean households.

2. Methods

A modified survey instrument was developed using standardized tools such as the USDA Food Security Assessment Tool as well as the World Food Programme's Emergency Food Security Assessment Tool [1]. This instrument was used for data collection where responses were scored, and the level of food security assigned. This survey sought to assess the change in food access, availability, and utilization at the household level before and during COVID-19.

The eight countries selected to participate in this study were: Antigua, Barbados, Belize, Guyana, Jamaica, St. Kitts & Nevis, St. Vincent, and the Grenadines, Trinidad & Tobago. These English-speaking Caribbean countries were selected based on trends in the spread of COVID-19 which saw them having the highest number of affected

individuals at the time the study was done. Data were collected either in person or via telephone. Random-sampling techniques were employed to capture all social and demographic strata. Interviews were conducted with the household head or household member who was 18 years or older. Sampling was guided by data available from previous population surveys and other national data. Lists of contact numbers were obtained for households in each region. From these lists, sampling frames were established, and systematic random sampling was then applied.

The countries which conducted interviews by telephone exclusively were Antigua, Barbados Guyana, Jamaica, and Trinidad & Tobago. In St. Kitts and Nevis, questionnaires were administered in person using physically distant protocols. Stratified random sampling was used to

select proportions from each region consisting of major towns/cities. Systematic random sampling was then used to select respondents using preset intervals. Belize and St. Vincent and the Grenadines used a mix of both approaches depending on the region and circumstances at the time.

3. Results

The study involved 2250 participants from the 8 countries, with percentage participation from each country ranging from 9.3 to 17.8%. Most households reported that they were moderately to severely impacted by the changes due to the COVID-19 pandemic (Figure 1).

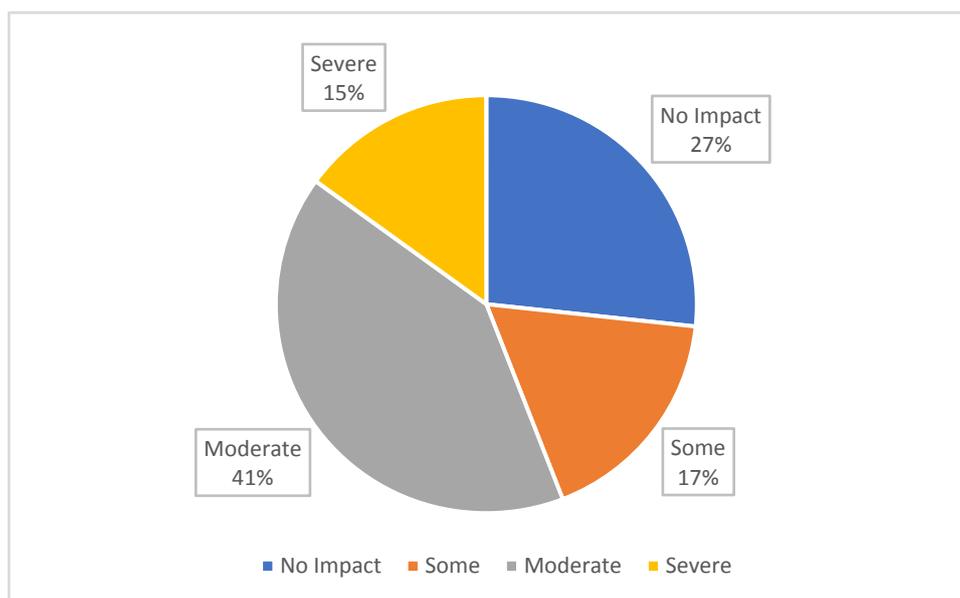


Figure 1. Impact of Covid-19 on the livelihood of the households

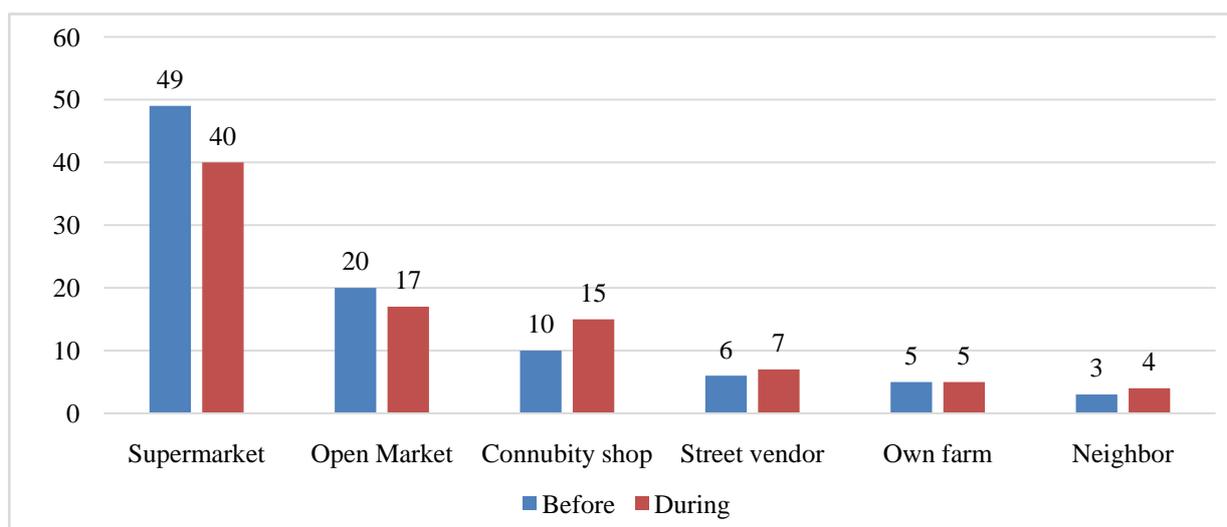


Figure 2. Change in Food source among the severely affected

Across the countries, households severely affected used smaller community shops rather than the supermarkets and municipal (open) markets (Figure 2).

Households severely affected also altered the type of foods consumed. Figure 3 shows that the consumption of rice and eggs significantly increased whereas

meats, fish, chicken, vegetables, and fruits decreased markedly.

Dietary quality was reported as satisfactory to excellent among most households across the eight countries but 16% rated their diet as being not so good or poor during the crisis (Figure 4).

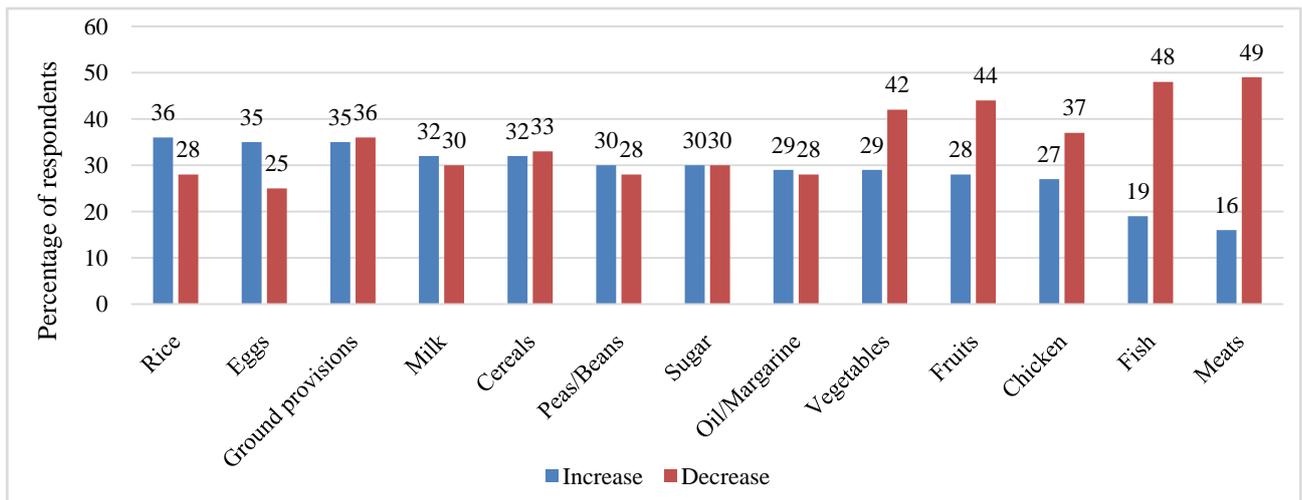


Figure 3. Change in the type of food consumed by those severely affected

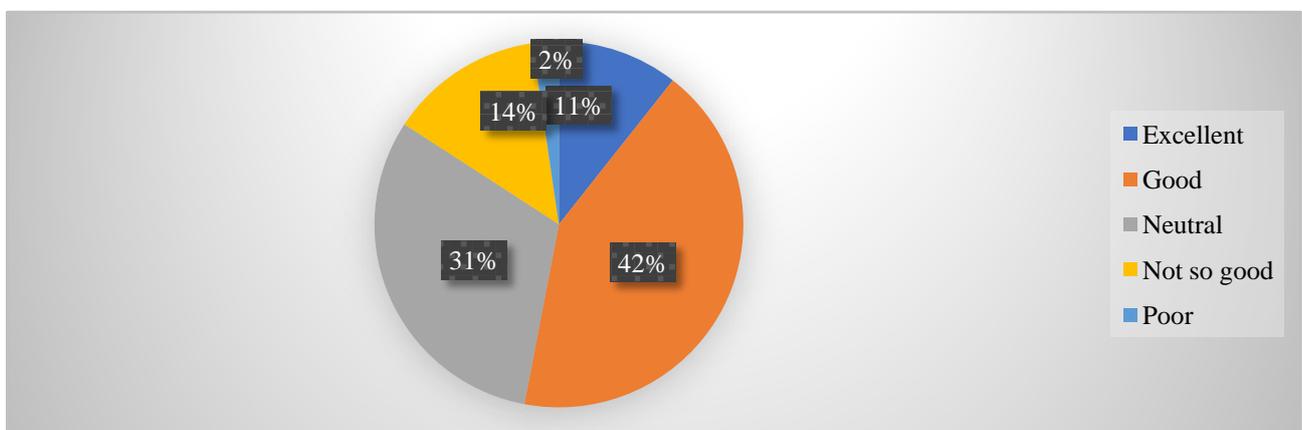


Figure 4. Quality of Household diet during COVID-19

Table 1. Hunger Index

	Never	1- or 2-times during the crisis	Almost weekly	Almost every day
Worry about food running out	0	1	1	2
Cut/Skip meals	0	2	2	3
Go without food all day	0	3	4	4

No = 0 Mild =1 Moderate =2 Severe = 3&4.

To develop a hunger index, the responses were grouped into categories of no hunger, mild, moderate, and severe hunger (Table 1).

Forty percent of households reported some form of hunger. Of them, 42% were moderate or severe hunger (Figure 5).

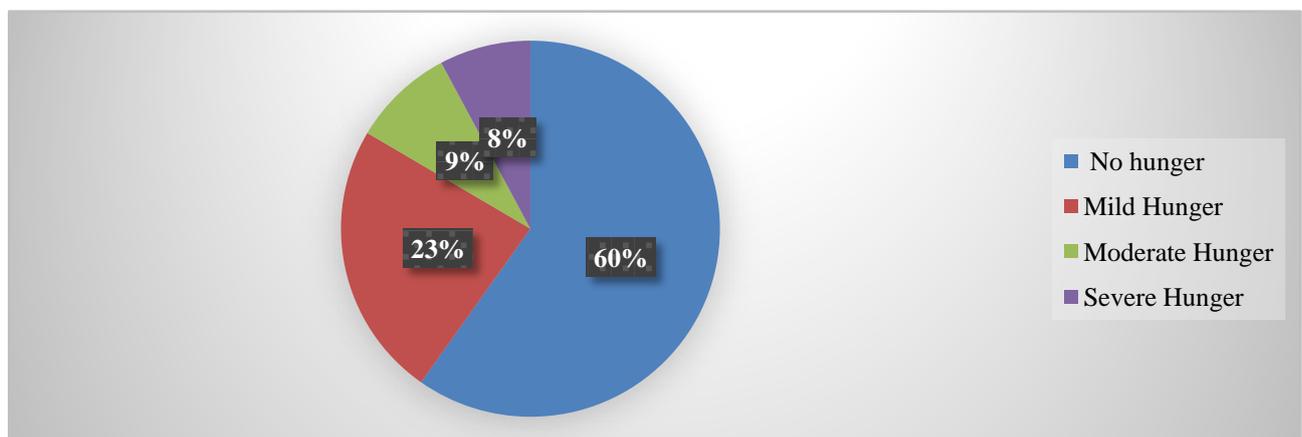


Figure 5. Prevalence of hunger during the COVID crisis

4. Discussion

Countries like those in the Caribbean which are net food importers suffer more from price changes during a crisis [2]. It was shown that Venezuela and Guyana saw food price increases of nearly 50 percent [3]. Other countries experienced a temporary glut on the food market at the start of the crisis. The variable pricing of foods is complex and is due in part to local supply and external restrictions [4] as well as currency depreciation [5].

Most households reported a moderate to severe impact of the Covid-19 pandemic on their livelihoods. A drop in earnings for low-income households could be highly stressful to maintain basic living standards. Key expenses are usually utilities, rent (if dwelling not owned), mortgages (if own), and clothing. Food often forms a large part of the budget especially for households with a high dependency ratio. The study showed that during the crisis 40% of Caribbean households experienced some form of hunger and 42% described the hunger to be moderate or severe. The increase in food prices during the pandemic has increased the vulnerability of many households to hunger and this reduced their ability to access the available foods to meet their nutritional needs [6]. It should also be noted that this hunger was primarily expressed as going without food almost every day or weekly. This means that those households that experienced hunger may become nutritionally vulnerable as both the caloric and nutrient intakes are reduced. For subgroups such as the elderly, children, those with NCDs, and women who are pregnant/lactating, the risk is even greater. Going without a meal for these subgroups compromises health and may increase the mortality for those that contract Covid-19.

The use of food outlets also shifted for those severely affected by the pandemic. Supermarkets continued to be the most popular but there was a drop of 8% in their use. Municipal/open market use fell by 3% but community/corner shops increased by 5%. The increase in the use of community/ corner shops can be attributed to convenience even though these outlets often have higher food prices compared to other outlets. However, hunger was still persistent. Barrett has shown that globally, the lockdown measures have disrupted the availability, pricing, and quality of food [7]. Studies elsewhere have shown a sharp decline in demand for certain perishable foods, and some meats [8,9]. Further, studies show that poor households shift their spending away from fresh fruits and vegetables, [10] and towards consumption of more processed foods [11].

In the most affected households in the Caribbean purchases of meats, fish, chicken fruits, and vegetables were significantly down whereas there was an increase in rice and egg consumption. Although many of these eating patterns were driven by price changes and availability, the nutritional implications are nevertheless important. The reduced intake of food from animals is a concern to the extent of consuming high biological protein. To compound this the drop in consumption of vegetables and fruit, if prolonged, can lead to negative nutritional consequences. The antioxidants provided by these foods are pivotal in the recovery efforts especially in those

vulnerable groups, the elderly. Thus, vulnerable groups are now at a greater risk for a severe health outcome during the pandemic as the key nutrients that will aid recovery are now on a decline. These changes in diet, if sustained, could place the affected populations more at risk of adverse health outcomes [12]. The double burden of disease now becomes a serious threat as the likelihood for short-term deficiencies in nutrient profiles across the lifecycle will become more apparent especially in children where having adequate nutrients is an important factor for growth and development.

Studies [13] estimate that low-income countries that rely on food imports will suffer major effects as a direct result of the pandemic and it is noted that most Caribbean countries are net importers of food. In addition to the high dependence on imports, several authors in 2020 have pointed to other aspects of the food system that can be affected by the pandemic [14,15]. These include disruptions to food supply chains, social protection programs, and altered food environments. The effects of these disruptions often lead to the widening of inequalities.

These findings describe the situation in July 2020. As the crisis continues to rage and the hunger profile of the vulnerable is prolonged, food insecurity will persist and thus the risk of nutritional deficiencies will develop. Children, the elderly, pregnant and lactating women are now in a state of hunger as families are no longer able to support the household caloric needs as the food prices increase. The increase in the cost of the cheapest foods has led many families to go hungry almost every day. The implications of the findings of this report are therefore likely to become worse during this transition to stability.

Crisis often causes widespread disruptions in a nation's food security framework. The shocks brought on by the pandemic have led to disruptions in food supply chains which are important in ensuring the population remains food secure. To reduce the impact of the pandemic on the available food systems more should be done to bolster supplies from local farmers and markets so that foods can be provided at a reduced cost to ensure that the vulnerable can access and utilize those foods available. Social protection programs should be nutrition-sensitive so that vulnerable groups including women, children, the elderly, and persons with disabilities are not only provided with financial assistance but also given the means to sustain adequate nutrition. These suggestions would help many households cope with the shocks to food security they now face and thus improve their outlook to a new normal - post COVID-19.

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