

Research Article

Post-COVID-19 Household Food Insecurity in Jamaica

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Abstract

Objective: The dual burden of the COVID-19 pandemic and the Ukraine-Russia conflict has weakened food systems globally, leaving several populations at risk of hunger. Developing countries like Jamaica are particularly vulnerable to the economic shocks of these events. It is therefore critical to broaden our understanding of food security and the analytic framework necessary to effect sustainable change. This study assessed household food security in Jamaica after COVID-19 and amid inflation.

Methods: Households in high and low-income communities across all 14 parishes in Jamaica were randomly sampled to participate in this survey which assessed household food security status post-COVID-19.

Key Findings: The results of this study highlighted that: 1) there were notable decreases in the consumption of all food types across households; 2) inadequate dietary quality was reported by 54% of households; and 3) some form of hunger was reported by 67% of households in this study, with the majority reporting moderate-severe hunger.

Discussion and Conclusion: This study gives a timely reminder of the fragility of the food system in Jamaica and similar countries in the developing world. As countries aim to recover and regain stability, households remain at risk, and the situation on the ground may worsen; 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, Ukraine-Russia conflict, Inflation, Food security, Nutrition, Policy, Jamaica

Introduction

Previous studies on recent social crises in Jamaica emphasized the need to address the underlying social inequities that exist [1]. This study explores the impact of crises on the dynamics of nutrition and food security. The Food and Agricultural Organization of the United Nations (FAO) states that food security exists “when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” [2]. Food security is, therefore, dependent on the stability of factors that drive availability, physical and financial access, and food utilization. In order to minimize the spread of the SARS-CoV-2 virus and the associated health and economic impacts of COVID-19, governments worldwide imposed several essential public health measures [3]. However, these restrictions resulted in the destabilization of the underpinning factors of food security. There were: 1) disruptions to food availability mediated through disruptions in food supply and trade; 2) interruptions to physical access owing to the unavailability of public transportation and the enforcement of social distancing enforcement [4]. Job and income losses, as well as food price increases, affected people’s economic access to food [5].

Economic recovery from COVID-19 has been further strained by the political instability created by the Ukraine-Russia conflict [6,7]. The intricate health-economic nexus that has emerged from the

pandemic continues to exacerbate financial susceptibilities worldwide [8]. Like the pandemic-imposed safety measures, the Ukraine-Russia conflict has disrupted food trade and supply. The resulting rationing of food supplies, exorbitant food and fuel prices, rising inflation, and tight bankrolling continue to drive global food insecurity, poverty and food fraud [9,10].

During the pandemic, 40% of households in eight Caribbean countries reported some form of hunger [11]. The Jamaica Health and Lifestyle Survey III (2016-2017) highlighted that more than 70% of the population were food insecure [12]. In 2022, the World Food Programme estimated that 58% of the Jamaican population were moderately-severely food insecure [13]. Due to Jamaica’s heavy reliance on tourism, its economy suffered a severe contraction during the COVID-19 pandemic due to travel restrictions [14]. Although the Government of Jamaica managed to keep the economy relatively stable during and after the pandemic, inflation, steep rises in food and service prices, and higher interest rates harshly affected Jamaican households [15]. The new challenges created by the Ukraine-Russia conflict further limit advances in economic growth and recovery. Like many other countries, what started out as a health crisis quickly progressed into an economic crisis [16]. The intersection of the food supply chain and health systems continues to threaten food and nutrition security [17]. This interconnection can be highlighted by the average Jamaican’s inability to afford healthy, fresh food supplies and

essential commodities, especially for the most vulnerable. To stem the spread of food security, monitoring and evaluating the population food security status amidst emerging shocks remains critical. As such, this study sought to evaluate the current state of household food security in Jamaica so that this can be appropriately addressed by decision-makers. This study, therefore, assessed the food security status of households in Jamaica two years after the peak effects of COVID-19.

Methods

This study used a survey instrument to assess the effect of inflation on food security in Jamaican households. Researchers assessed the impact of inflation on food consumption, the status of hunger, the hunger index, and the quality of food consumption among Jamaicans. The random sampling captured high and low socioeconomic strata in the 14 parishes of Jamaica, utilizing available national data. The methods to select high- and low-income areas were based objectively on the size and quality of the homes, vehicles, and other assets in the community. Further, the high- and low-income areas were categorized using key informants in the parish. Thereafter, a random selection of high- and low-income areas was made. One high-income and one low-income area were selected in each parish. Interviews were conducted with the household head or household member who was 18 years or older. The household sampling procedure started in the center of each area selected and randomly extended across the area.

A hunger index was created thus:

No = Never worried about running out of food; never had to skip meals or go without food all day

Mild = Worried about running out of food 1-2 times during the crises or almost weekly

Moderate = Worried about running out of food almost every day; skipped meals 1-2 times during the crises or almost weekly

Severe = Skipped meals almost every day; go without food 1-2 times during the crisis, almost weekly or almost every day

Results

This study interviewed household heads from 572 households across all 14 parishes in Jamaica. The age of the household head ranged

from 20 to 91 years, with a mean age of 49 years. Females headed 51.6% of the households. The size of the households ranged from 1 to 12 persons, with a mean of 4. Only 5.3% did not complete primary education, and 30.1% graduated from a tertiary institution. In this study, 33.8% of households were classified as low-income (<J\$ 9,000 per week); 40.2% were grouped as middle-income (J\$9,000-J\$19,375), and 26% were in the high-income group earning more than J\$19,376 [1]. Since the COVID-19 pandemic, households have modified the types and amounts of foods consumed.

Figure 1 shows that 33-50% of households decreased their consumption of all food types with meat, fish, vegetables and fruit among the main foods. A much smaller number of households (5-15%) increased food consumption mainly in rice, vegetables, fruits and ground provisions.

Table 1 shows that approximately 33% of households did not have sufficient food to eat either sometimes or often.

Figure 2 shows that 31% of households described their diet quality as “not so good” or poor, whereas 42% described their diet as good or excellent.

A statistically significant relationship was found between household income and diet quality (Table 2). Higher income households rated their diet quality as good (37.7%) or excellent (16.4%), while low-income households described the quality of their diet as either neutral (28.9%), not so good (28.4%) or poor (10.5%).

Using the hunger index, responses about hunger status were grouped into categories of no hunger, mild, moderate, and severe hunger. Sixty-seven percent (67%) of households reported some form of hunger, with 55% of those households reporting moderate to severe hunger, as shown in Figure 3.

Table 1: Access to Sufficient Food by Households in Jamaica.

Description	N	%
Always have enough of the kinds of food we want to eat	99	17.4
Have enough but not always the kind of food we want	284	49.8
Do not have enough to eat sometimes	124	21.8
Do not have enough to eat often	63	11.1
Total	570	100.0

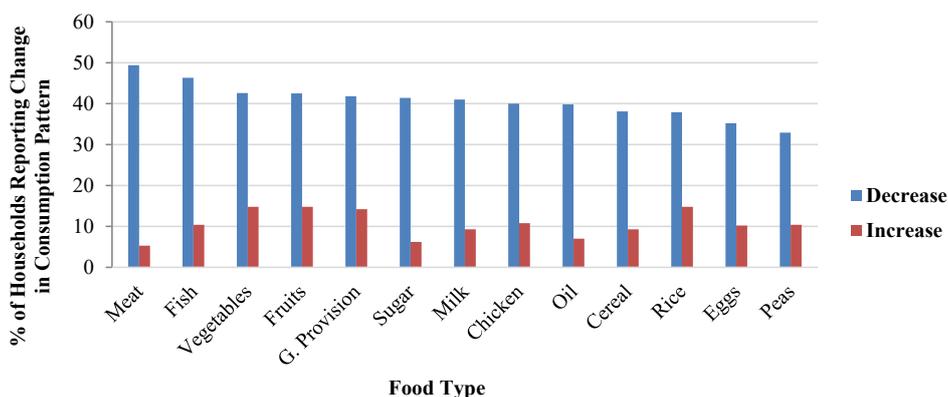


Figure 1: Change in food consumption by household.

Table 2: Household Diet Quality by Income.

Quality of Diet	Household Income Bracket (J\$)						Total	
	\$9,000 or less		\$9,001 to \$19,375		≥ \$19,376		N	%
	N	%	N	%	N	%		
Excellent	5	2.6	12	5.3	24	16.4	41	7.3
Good	56	29.5	88	38.8	55	37.7	199	35.3
Neutral	55	28.9	56	24.7	38	26.0	149	26.5
Not so good	54	28.4	58	25.6	21	14.4	133	23.6
Poor	20	10.5	13	5.7	8	5.5	41	7.3
Total	190	34.0	227	40.3	146	25.9	563	100.0

$\chi^2(8) = 38.886, p < .001$

Table 3: Hunger by Household Income in Jamaica.

Hunger status	Household Income Bracket (J\$)					
	\$9,000 or less		\$9,001 to \$19,375		≥ \$19,376	
	N	%	N	%	N	%
No Hunger	36	19.1	70	31.0	78	53.4
Mild Hunger	22	11.7	28	12.4	19	13.0
Moderate Hunger	91	48.4	103	45.6	42	28.8
Severe Hunger	39	20.7	25	11.1	7	4.8
Total	188		226		146	

$\chi^2(6) = 55.769, p < .001$

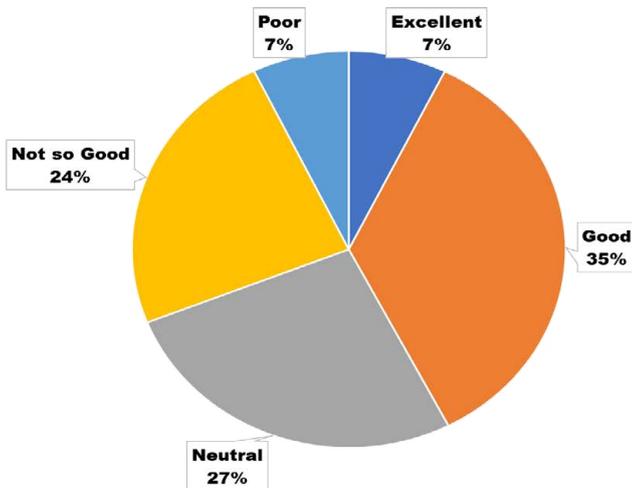


Figure 2: Quality of meals post-COVID-19 and during inflation.

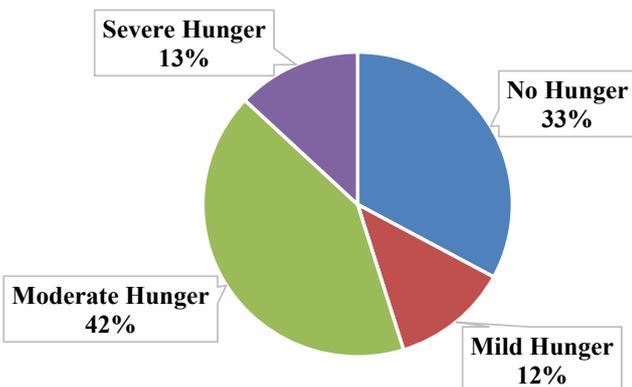


Figure 3: Status of hunger post-COVID-19 and during inflation.

A statistically significant relationship was also found between hunger status and income as seen in Table 3. Households with a higher weekly income experienced no hunger (53.4%) compared to middle- and low-income households that were more affected by moderate to severe hunger.

Discussion

Less developed countries such as Jamaica need to implement bold policies and innovative solutions to ensure sustainable food and nutrition security, despite the intermittent shocks and crises that are inevitable. The United Nations Department of Economic and Social Affairs highlights Jamaica as a country for priority attention as the world navigates extraordinary health and economic crises [18]. Some of the weaknesses that leave Jamaica vulnerable to several global economic shocks include its: 1) lack of economic diversity, 2) heavy reliance on tourism and disproportionate food import bill, and 3) exorbitantly high public debt in the face of debt service inhibiting growth [14]. Given the high vulnerability to economic instability, the livelihoods of Jamaican households remain under threat, and more Jamaicans remain at risk of becoming food insecure.

The decreased consumption across all food types highlights an important trend and suggests that the ability of Jamaicans to secure food is constrained. This could be due to inconsistencies in supply, mixed with contractions in demand due to the inability to afford food owing to reductions in household income, together with the staggering food costs associated with the country's net food import [13]. The decreased consumption could also indicate that households are losing their ability to cope through previously applied mechanisms of using up savings and accessing safety nets [11]. It is therefore important

to acknowledge the emerging consumption trends as a concern, especially as it relates to low-income households and households with dependent children. Typically, this decrease in staple food items could indicate that households may have increased consumption of nutrient-poor, calorie-dense foods that are cheaper and high in sodium, added sugars and trans-fats. This could have deleterious implications for population health and well-being, specifically as it relates to Non-Communicable Diseases (NCDs) prevention and control, in the near and distant future, even as Jamaica continues to grapple with the overwhelming prevalence of obesity and NCDs [19].

Furthermore, sub-optimal dietary quality increases the risk of nutritional deficiencies and related risks of adverse health outcomes. These challenges could be sustained if the key drivers remain unaddressed. At the same time, the hunger profile of the population is also staggering at 67%. This may indicate that households are skipping meals as they are unable to afford even the cheapest food due to food price inflation as well as limitations on their earnings and therefore buying power.

While there is a consensus that the recent crises will likely increase all forms of malnutrition and undermine economic recovery, it is difficult to assess their actual impact on the economy, population health and food systems. Notwithstanding, it is clear that the food security status of developing nations like Jamaica requires constant monitoring and evaluation from multiple research standpoints to enable effective responses to food and nutrition insecurity during crises and to inform the building of resilient and sustainable food systems. The cost of food in Jamaica increased steadily over the last year, which was 14.24 in November 2022, over the same month in the previous year [20]. This price rise is evident from the Jamaica Food Inflation data by Trading Economics, that is, from 9.85 in January 2022 to 14.24 in November 2022 [20]. As Jamaica tries to advance its development goals in alignment with the Sustainable Development Goals 2030, its leaders should prioritize actions that will strengthen food security and contain food inflation. These can include investing in shock-resilient community-based agriculture to support domestic food demand, reduce food imports and increase revenue by supplying international markets. Decision-makers should also address the factors that constrain household food access, both physical and economic, and focus on expanding safety nets for the most vulnerable in the population.

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