

Original Research Article

From pandemic shock to inflation: a comparative analysis of household food security and coping strategies in Jamaica, before, during and post COVID-19

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ABSTRACT

Background: Jamaica experienced successive shocks from the COVID-19 pandemic and the inflationary period that followed. This study compared household income, coping strategies and hunger indicators across 2018, 2020 and 2022, with 2018 used only as a contextual comparison rather than a stable baseline.

Methods: A comparative secondary analysis was conducted using aggregate household data. The main comparison was between 2020 and 2022. Descriptive percentage and percentage-point changes were examined for income categories, coping responses and household hunger.

Results: From 2020 to 2022, use of savings rose from 59.0% to 74.1%, borrowing from 24.6% to 46.0%, reduced meal quality from 16.0% to 31.0%, and begging from 5.5% to 28.0%; remittance use fell from 56.0% to 10.2%. No hunger declined from 58.3% to 32.9%, while moderate hunger increased from 13.5% to 41.8%. Combined moderate and severe hunger increased from 23.3% to 54.8%.

Conclusions: Household vulnerability was greater in 2022 than in 2020. The findings indicate increasing reliance on erosive coping strategies and worsening hunger during the post-pandemic inflationary period. Further study is required to clarify causal pathways and guide targeted social protection programmes.

Keywords: Coping strategies, COVID-19, Food insecurity, Household hunger, Inflation, Jamaica

INTRODUCTION

Food security encompasses reliable physical, social and economic access to sufficient, safe and nutritious food. It is multidimensional, involving availability, access, utilisation and stability, and remains a central regional and global development concern.^{1,2}

The COVID-19 pandemic disrupted employment, income, food supply chains and access to nutritious diets, making low-income households vulnerable to sudden losses of purchasing power.^{3,4} These shocks were superimposed on existing inequalities and increased risks of malnutrition and adverse health outcomes.^{5,6}

In the Caribbean, the pandemic exposed vulnerabilities associated with food import dependence and household livelihood disruption.⁷ By 2022, global food and energy price pressures, tighter financial conditions and the war in Ukraine contributed to a second economic shock.⁸⁻¹⁰

Jamaican evidence from 2022 documented widespread increases in food prices and household reliance on savings and borrowing during inflation.¹¹ Other Jamaican studies also described post-COVID 19 household food insecurity.¹² A World Bank poverty assessment subsequently reported that rising food prices constrained recovery in living standards and disproportionately affected lower-income households.¹³

This comparative analysis looked at household data for 2018, 2020 and 2022. The 2018 data are used only for comparison and are not treated as a stable pre-pandemic baseline. The main analytic contrast is between 2020 and 2022, representing the pandemic and post-pandemic inflationary periods, respectively. The objective was to compare household income distribution, coping strategies and hunger, and to assess whether the pattern of household vulnerability intensified by 2022.

METHODS

This comparative secondary analysis utilized two nationally representative cross-sectional household surveys conducted in Jamaica during different phases of the COVID-19 pandemic and post-pandemic recovery. The first survey, undertaken in June 2020, assessed the immediate socioeconomic effects of the COVID-19 pandemic on Jamaican households, while the second, conducted in 2022, evaluated household food security during the post-pandemic period amid rising food inflation. The comparative design enabled assessment of changes in household income, livelihood disruption, food security, hunger, and coping strategies over time. The 2018 data is used only for comparison.

The 2018 study included 1,197 subjects while the 2020 survey included 402 households representing all fourteen parishes of Jamaica. Adult household members responsible for household decision-making and food purchasing were interviewed regarding demographic characteristics, household income before and during COVID-19, livelihood disruption, coping strategies, and household hunger. The 2022 survey included 572 households selected using a multistage random sampling procedure. High- and low-income communities were identified using housing characteristics, household assets, and community informants, with one community from each category randomly selected within each parish.

Household heads or adults aged 18 years and older were interviewed.

Variables common to both surveys included household income, household size, livelihood disruption, household hunger, food security, coping strategies, use of savings, borrowing behaviour, receipt of financial assistance, and respondent gender. Additionally, the 2022 survey assessed perceived dietary quality, adequacy of household food supply, changes in food consumption by food group, and household income classification. Household hunger was categorized as no hunger, mild, moderate, or severe using standardized household hunger indicators.

Data were summarized using descriptive statistics, including frequencies, and percentages where appropriate. Comparative analyses examined trends for 2018, 2020 and 2022. Ethical approval was obtained from the University of Technology, Jamaica, and all participants provided informed consent.

RESULTS

Table 1 shows a changing household income distribution, although direct numerical comparison is constrained by different category cut-points. In 2018, 49.46% of households earned less than US\$87.21 per week, 18.99% earned US\$87.21-130.80, and 31.55% earned more than US\$130.80. In 2020, 26.6% were below US\$65, 31.1% were in the US\$65-125 category, and 42.3% exceeded US\$125. By 2022, 33.7% were below US\$57, 40.3% were in the US\$57-122.8 range and only 25.9% exceeded US\$122.8. The most meaningful within-table observation is the contraction of the highest reported income category from 42.3% in 2020 to 25.9% in 2022, a 16.4 percentage-point decline, accompanied by increases in the two lower categories. The 2018 distribution is presented only for context.

Table 1: Household income before, during and after COVID-19.

Household income/week (US\$)	2018 %	Household income/week (US\$)	2020 %	Household income/week (US\$)	2022 %
<87.21	49.46	<65	26.6	<57.0	33.7
87.21-130.80	18.99	65-125	31.1	57.0-122.8	40.3
>130.80	31.55	>125	42.3	>122.8	25.9

Note: Income thresholds differ by period; 2018 is used only for comparison

Figure 1 demonstrates a broad intensification of coping responses in 2022. Relative to 2020, savings use increased by 15.1 percentage points (59.0% to 74.1%), borrowing by 21.4 points (24.6% to 46.0%), loans by 8.4 points (7.0% to 15.4%), sale of physical assets by 10.3 points (3.7% to 14.0%), reduced meal quality by 15.0 points (16.0% to 31.0%), and begging by 22.5 points (5.5% to 28.0%). Welfare assistance remained high, changing only from 33.1% to 32.0%.

Remittance use showed the largest reverse movement, falling 45.8 percentage points from 56.0% to 10.2%. Compared only contextually with 2018, 2022 also showed higher savings depletion, borrowing, reduced meal quality, welfare assistance and begging. The clustering of savings depletion, debt-based coping, poorer meal quality and begging indicates greater household strain in 2022.

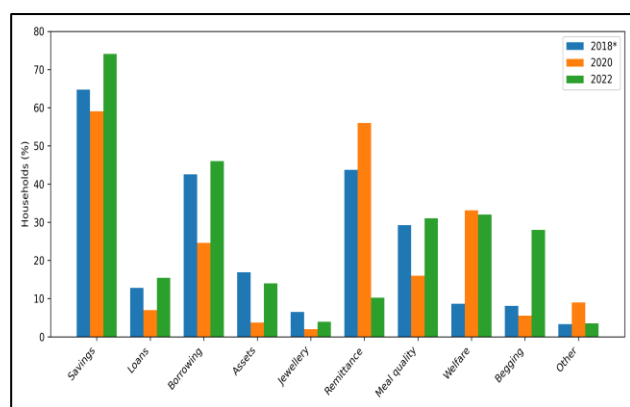


Figure 1: Household coping strategies in 2018, 2020 and 2022.

*2018 data are shown only for comparison.

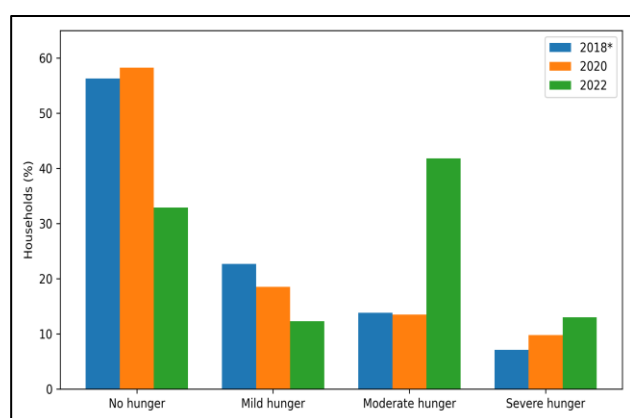


Figure 2: Distribution of Household Hunger Index categories in 2018, 2020 and 2022.

*2018 data are shown only for comparison.

Figure 2 provides the clearest evidence of worsening household food insecurity. No hunger fell from 58.3% in 2020 to 32.9% in 2022, a decline of 25.4 percentage points. Mild hunger also declined, from 18.5% to 12.3%, but this occurred alongside a sharp shift into more serious hunger categories. Moderate hunger rose from 13.5% to 41.8%, an increase of 28.3 percentage points, and severe hunger increased from 9.8% to 13.0%. When moderate and severe hunger are combined, the proportion increased from 23.3% in 2020 to 54.8% in 2022. For comparison only, combined moderate and severe hunger was 20.9% in 2018. Thus, the 2022 distribution reflects not merely more households experiencing hunger but a pronounced movement toward moderate hunger.

Table 2 synthesizes the direction of change across eight indicators. In 2018, every indicator was rated 1 (low/minimal impact), reinforcing its role here as a comparison point rather than an assumed stable baseline. During 2020, income reduction was rated high/severe (3), while savings use, borrowing, food consumption, dietary quality, household food insecurity and household hunger were rated moderate (2); inflation effect remained

low/minimal (1). By 2022, seven of the eight indicators were rated high/severe (3): savings used, borrowing, food consumption, dietary quality, inflation effect, household food insecurity and household hunger. Income reduction alone was rated moderate (2), declining from its 2020 high/severe rating. The data suggests a transition from an acute income shock in 2020 to a broader post-pandemic affordability and food-security crisis in 2022.

Table 2: Summary of household food-security impacts.

Indicator	2018*	2020	2022
Income reduction	1	3	2
Savings used	1	2	3
Borrowing	1	2	3
Food consumption	1	2	3
Dietary quality	1	2	3
Inflation effect	1	1	3
Household food insecurity	1	2	3
Household hunger	1	2	3

Scale: 1=Low/minimal impact; 2=Moderate impact; 3=High/severe impact. *2018 is used only for comparison.

DISCUSSION

The findings show that household vulnerability in 2022 was qualitatively different from, and on several measures more severe than, the 2020 pandemic-period profile. The 2020 period was characterised by a high impact on income reduction, whereas 2022 showed high/severe impacts across savings, borrowing, food consumption, dietary quality, inflation, food insecurity and hunger. This is consistent with evidence that the pandemic initially operated through employment and income shocks, while subsequent food and energy inflation eroded purchasing power and living standards.^{8,9,13}

The 2022 coping profile is particularly concerning because households increasingly relied on strategies that can weaken future resilience. Savings depletion reached 74.1% and borrowing 46.0%. Henry, Campbell, Reid, Ford and Balachandar similarly reported that almost three-quarters of Jamaican households used savings to cope with inflation and that borrowing was concentrated among low- and middle-income households.¹¹ International literature identifies asset depletion, debt and reduced consumption quality as responses that may protect immediate consumption while increasing longer-term vulnerability.^{14,15}

The rise in reduced meal quality from 16.0% in 2020 to 31.0% in 2022 is important because food insecurity may first manifest through compromised diet quality before severe quantitative food deprivation occurs. Food insecurity is associated with adverse health outcomes, and nutritional deterioration can disproportionately affect children and other vulnerable groups.^{5,6,16}

The hunger findings reinforce this interpretation. Moderate and severe hunger together increased from 23.3% in 2020 to 54.8% in 2022. This is directionally consistent with other evidence from Jamaica in 2022. A World Bank poverty assessment, drawing on the Caribbean COVID-19 Food Security and Livelihoods Impact Survey, reported substantial moderate or severe food insecurity and difficulty maintaining healthy diets, particularly among low-income respondents.¹³

The marked fall in remittance use from 56.0% to 10.2% should be interpreted cautiously. Remittances can buffer shocks, but the data not establish whether the observed decline represents reduced remittance receipt, or lower reliance on it. Similarly, the relatively stable welfare-assistance prevalence between 2020 and 2022 is not conclusive on the effectiveness or adequacy of the programme.

The wider context supports the plausibility of an inflation-related mechanism. In 2022, the World Bank reported high domestic food-price inflation across most low- and middle-income countries and substantial increases in major agricultural commodity prices.¹⁷ The United Nations also identified global food, energy and finance pressures associated with the war in Ukraine, while the International Monetary Fund described tighter financial conditions across the Western Hemisphere.^{9,10}

The 2018 data are useful for showing earlier reported levels and for comparison however, the strongest descriptive comparison is between 2020 and 2022.

This analysis has several limitations including the use of aggregate data. Temporal association does not translate into inflation alone causing the deterioration; because households were simultaneously exposed to pandemic recovery effects and wider socioeconomic pressures.

CONCLUSION

This analysis demonstrates that household food insecurity in Jamaica intensified between the COVID-19 pandemic and the subsequent inflationary recovery period. While the pandemic initially resulted in widespread income loss, employment disruption, and increased reliance on household coping strategies, the post-COVID-19 period evolved into a more persistent food security crisis characterised by declining purchasing power, deteriorating dietary quality, increased household hunger, and reduced household resilience. Although household incomes showed signs of recovery following the easing of pandemic restrictions, inflation substantially eroded these gains, limiting households' ability to access affordable and nutritious foods.

The increase in household hunger underscores the cumulative impact of consecutive economic shocks on household food security. The transition from temporary coping mechanisms during the pandemic to sustained

financial and nutritional hardship in the post-pandemic period demonstrates that economic recovery alone is insufficient to restore food security. Policies that focus exclusively on income recovery without addressing inflation, food affordability, and purchasing power are unlikely to achieve meaningful improvements in household nutritional well-being.

For Jamaica, building resilient food systems requires coordinated action across the agriculture, health, social protection, trade, and economic sectors. Strengthening domestic food production, reducing dependence on imported foods, improving targeted social assistance programmes, protecting vulnerable households from inflationary shocks, and promoting access to affordable, nutritious diets should be central components of national food security policy. Continued longitudinal monitoring of household food security and dietary patterns is essential for identifying emerging vulnerabilities, evaluating policy effectiveness, and informing evidence-based strategies to enhance resilience to future public health, economic, and climate-related crises.

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