



# Reports of Nervousness, Depression, Food Insecurity, and Financial Insecurity in Low- and Middle-Income Countries

Insights from the COVID Behaviors Dashboard

## Research Question

The COVID-19 pandemic has exacerbated psychological and economic distress in many countries around the world, causing existing health and socioeconomic inequities to worsen.<sup>1,2</sup> In low- and middle-income countries (LMICs), people have reported increased symptoms of anxiety and depression in addition to economic adversity.<sup>2,3,4</sup> Understanding the extent of pandemic-related psychological and economic distress in LMICs can inform the planning and provision of mental health and social support services in the near term as well as strategies for the continuation of mental health and social protection programs post-pandemic. This research brief presents trends in reported nervousness, depression, food insecurity, and financial insecurity in 21 LMICs from June through September 2021.

## About the COVID Behaviors Dashboard and the data behind it

This brief provides a secondary analysis of data from the COVID-19 Trends and Impact Survey (CTIS), generated by the University of Maryland Social Data Science center in collaboration with Facebook's Data for Good Initiative Analysis. CTIS data are presented through the interactive COVID Behaviors Dashboard, prepared by researchers and social and behavior change communication experts at Johns Hopkins Center for Communication Programs in coordination with WHO's Global Outbreak Alert and Response Network (GOARN). The dashboard presents data on COVID-related knowledge, attitudes, and practices, and responses are weighted for better data representation within each country.

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**Understanding the extent of pandemic-related psychological and economic distress in LMICs can help inform the planning and provision of mental health and social support services.**

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## Data and Methods

The COVID-19 Trends and Impact Survey (see sidebar) uses repeated cross-sectional sampling and is administered daily to active adult (18+ years) Facebook users.<sup>5</sup> This analysis included survey responses recorded between June and September 2021 in 21 USAID focus countries.<sup>6</sup> The sample consisted of 491,078 survey responses (68% males and 32% females). Sample sizes per country varied drastically, with India having the largest number of survey responses (128,427) and Burkina Faso having the fewest (931).

Researchers restricted the analysis to survey responses with answers to all four demographic questions regarding age group, sex category, education level, and

## Data and Methods, continued

residence in a city or non-urban area, plus at least one of the following questions:

- During the past seven days, how often did you feel so nervous that nothing could calm you down?
- During the past seven days, how often did you feel so depressed that nothing could cheer you up?
- How worried are you about having enough to eat in the next week?
- How worried are you about your household’s finances in the next month?

For questions about feeling nervous or depressed, respondents selected from five response options: “All of the time,” “Most of the time,” “Some of the time,” “A little of the time,” or “None of the time.” For questions about worrying about food or finances, respondents selected from four options: “Very worried,” “Somewhat worried,” “A little worried,” or “Not worried at all.” To assess feelings of nervousness and depression, analysts

dichotomized survey responses into the following categories: (1) all, most, or some of the time, and (2) a little or none of the time, or no answer. To assess worries about food and finances, survey responses were sorted into one of the following groups: (1) very or somewhat worried, and (2) a little or not worried, or no answer. Results presented in this brief focus on those who reported feelings of nervousness or depression all, most, or some of the time, and those who were very or somewhat worried about food or finances.

### USAID Priority Countries<sup>6</sup>

-Bangladesh	-Jordan
-Burkina Faso	-Kenya
-Côte d’Ivoire	-Mali
-Dem. Rep of Congo	-Mozambique
-Egypt	-Nepal
-Ethiopia	-Nigeria
-Ghana	-Pakistan
-Guatemala	-Philippines
-Guinea	-Senegal
-India	-South Africa
-Indonesia	-Zimbabwe

The authors used survey weights designed and computed by Facebook<sup>5</sup> to calculate summary statistics and perform chi-square tests. They aggregated data by month to calculate monthly weighted percentages and their 95% confidence intervals for each country’s whole sample and demographic subgroups with 100 or more respondents for each survey question per month. For each country, chi-square tests with a p value of 0.05 or below were used to compare responses at different time points and between demographic subgroups.

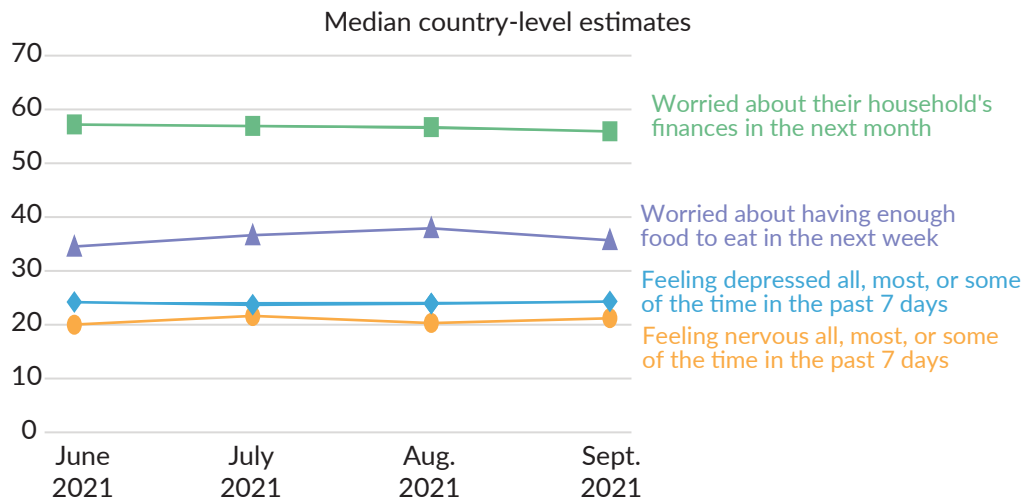
## Findings and Implications

### Nervousness

- A moderate percentage of participants (median of about 20%) reported feelings of nervousness between June and September 2021. The overall reporting of nervousness was stable from June to September (see Figure 1).
- In pooled analysis, feelings of nervousness were higher among younger adults (18-24 years) and people with lower educational attainment compared to their counterparts (see Figure 2). Differences by residential area were observed in some countries.
- Across the four-month period, monthly estimates of nervousness were consistently higher in Bangladesh, Egypt, Jordan, and Kenya and consistently lower in Indonesia (see Table 1).
- Monthly estimates of the percentage of people feeling nervous all, most, or some of the time over the

past seven days remained relatively stable over time in most countries. Estimates of nervousness varied significantly between different monthly time points in Egypt, India, Indonesia, Kenya, Mozambique, the Philippines, and South Africa. Estimates of nervousness for certain demographic subgroups varied significantly between time points in some countries.

**Figure 1: Trends in Feelings of Nervousness, Depression, and Worry about Food and Financial Insecurity**



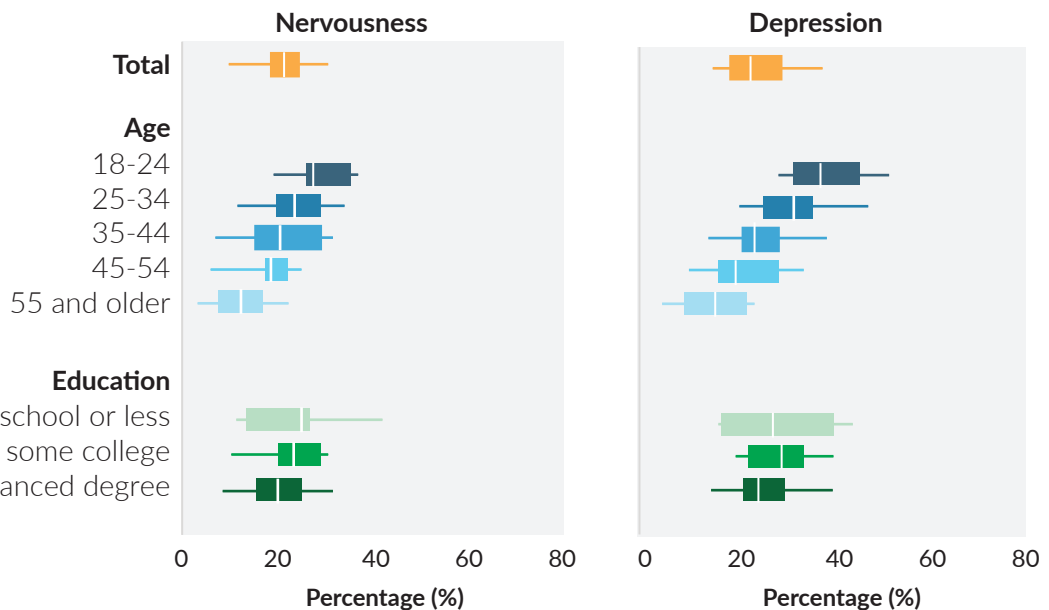
**Depression**

- Across all 21 countries, a moderate to high percentage of participants reported feelings of depression (a median of about 24%). In most countries, there was a higher percentage of people reporting feelings of depression than those reporting feelings of nervousness. Reporting of depression was stable between June and September 2021 (Figure 1).

**Figure 2: Nervousness and Depression by Age and Education (Sept. 2021)**

Country-level weighted percentages of people feeling nervous or depressed all, most, or some of the time in the past 7 days

Box plots present the distribution of weighted national percentages. They exclude monthly percentages from countries with fewer than 100 responses and exclude outliers.

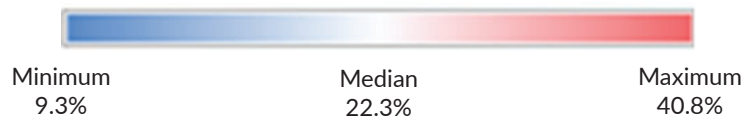


White bar in box plot identifies median percentage for the group of focus countries

- In pooled analysis, higher percentages of younger adults (18-24 years) and people with lower educational attainment reported feelings of depression compared to their counterparts (Figure 2). Differences by residential area were observed in some countries.
- Across the four-month period, monthly estimates of depression were consistently highest in Bangladesh, Egypt, Jordan, and Kenya and consistently lower in Indonesia (see Table 1).
- Monthly estimates of the percentage of people feeling depressed all, most, or some of the time over the past seven days remained relatively stable over time in more than half of the countries. Monthly estimates of reported depression varied significantly in Bangladesh, Egypt, India, Indonesia, Mali, Nigeria, the Philippines, and South Africa. Estimates of depression for certain demographic subgroups varied significantly between time points in some countries.

Table 1. Percentage of People Reporting Psychological Distress Between June and September 2021

	Percent feeling nervous all, most, or some of the time in the past 7 days				Percent feeling depressed all, most, or some of the time in the past 7 days			
	June	July	Aug.	Sep.	June	July	Aug.	Sep.
Bangladesh	28.9%	31.2%	30.0%	26.7%	37.5%	40.3%	40.8%	35.2%
Burkina Faso	13.6%	17.8%	11.2%	11.1%	12.8%	24.5%	19.0%	15.9%
Côte d'Ivoire	15.7%	14.9%	13.5%	16.4%	18.3%	20.2%	18.3%	23.7%
Democratic Republic of the Congo	24.1%	25.6%	20.1%	19.8%	25.6%	25.5%	21.2%	20.0%
Egypt	29.4%	24.8%	28.4%	30.0%	39.0%	34.3%	40.2%	38.9%
Ethiopia	24.8%	20.0%	22.7%	28.3%	26.5%	20.0%	26.9%	30.2%
Ghana	19.1%	18.8%	20.1%	18.1%	18.6%	21.9%	19.9%	19.8%
Guatemala	17.6%	19.3%	20.4%	19.1%	22.7%	22.2%	24.1%	22.7%
Guinea	12.9%	22.1%	20.3%	16.3%	21.0%	21.6%	22.2%	18.0%
India	17.1%	16.2%	15.5%	14.7%	22.7%	21.5%	21.1%	20.5%
Indonesia	11.0%	12.3%	11.6%	9.3%	16.0%	17.9%	18.5%	16.2%
Jordan	26.8%	27.1%	28.8%	28.2%	35.7%	36.6%	37.9%	38.1%
Kenya	30.8%	29.6%	31.7%	27.6%	32.4%	31.3%	33.3%	30.9%
Mali	23.0%	21.6%	15.4%	24.4%	25.7%	26.3%	13.3%	26.6%
Mozambique	15.7%	22.5%	15.3%	22.3%	19.9%	22.6%	19.0%	21.0%
Nepal	20.0%	21.6%	20.2%	20.2%	22.1%	24.1%	22.0%	24.3%
Nigeria	22.9%	20.5%	23.8%	23.2%	25.1%	21.4%	26.8%	24.2%
Pakistan	21.3%	20.8%	22.3%	24.4%	29.9%	28.2%	28.0%	30.8%
Philippines	18.9%	17.8%	17.5%	19.6%	24.2%	22.8%	23.9%	25.8%
Senegal	14.2%	21.9%	21.7%	24.0%	16.3%	23.7%	25.7%	24.7%
South Africa	24.8%	26.3%	24.7%	21.1%	28.0%	29.9%	30.0%	26.0%



This table presents monthly weighted percentages of people reporting psychological distress. Each numeric value is accompanied by a color to demonstrate how it compares to other values in the table. Blue shades indicate values are near the minimum value of the table. Light blue, white, and light red shades indicate values are near the median value of the table. Red shades indicate values are near the maximum value of the table.

**Food Insecurity**

- Across the 21 countries in the analysis, a moderate-to-high percentage of respondents (about 36%) reported food insecurity. In pooled analysis, worries about food insecurity did not vary between June and September 2021 (Figure 1).
- In most countries, more younger adults (18–24 years old), people with lower educational attainment, or people living in a town, village, or rural area reported feelings of food insecurity compared to their counterparts. Differences between males and females occurred in some countries.
- Across the four-month period, monthly estimates of food insecurity were consistently higher in Kenya and Nigeria and consistently lower in Pakistan (see Table 2).
- Monthly estimates of the percentage of people feeling very or somewhat worried about having enough food in the next week remained relatively stable over time in more than one-half of the countries. Monthly estimates of food insecurity varied significantly in Bangladesh, Guinea, India, Indonesia, Jordan, Kenya, Nepal, the Philippines, and South Africa. Estimates of food insecurity for certain demographic subgroups varied significantly between time points in some countries.

**Figure 3: Food and Financial Insecurity by Age, Education, and Residence (Sept. 2021)**

Country-level weighted percentages of people reporting food or financial insecurity



White bar in box plot identifies median percentage for the group of focus countries

## Financial Insecurity

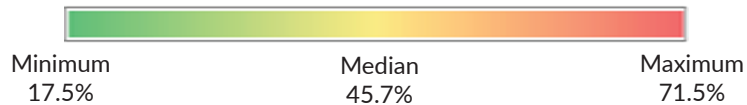
- More than one-half of respondents (at least 55%) reported financial insecurity in June, July, August, and September 2021. In most countries, more people reported financial insecurity than food insecurity. (Figure 1).
- In many countries, more younger adults (18–24 years old), people with lower educational attainment, or people living in a town, village, or rural area reported feelings of financial insecurity compared to their counterparts. Differences between males and females occurred in some countries.
- Across the four-month period, monthly estimates of financial insecurity were consistently higher in Kenya and Nigeria and consistently lower in Pakistan (see Table 2).
- Monthly estimates of the percentage of people feeling very or somewhat worried about their household's finances in the next month remained relatively stable over time in more than one-half of the countries. Worry about one's household finances significantly varied during the study period in Bangladesh, Egypt, India, Indonesia, Kenya, Mozambique, Nepal, the Philippines, and South Africa. Estimates of financial insecurity for certain demographic subgroups varied significantly between certain intervals in some countries (Table 2).

## Conclusions and Recommendations

- A moderate-to-large number of people reported psychological or economic distress during the analysis period, and rates remained relatively stable over time in some countries. These results call for additional resources for and widespread availability of mental health and social protection programs now and after the COVID-19 pandemic is over. Furthermore, results suggest investments in multi-focused programs integrating evidence-based interventions to address multiple aspects of psychological and economic distress may be improve public health outcomes.
- In many countries, indicators of psychological and economic distress were slightly-to-moderately higher for certain demographic subgroups. Collecting and reviewing disaggregated data to better understand which groups are experiencing higher levels of psychological and economic distress is vital for ensuring mental health and social protection programs reach those who need them most, especially in resource-limited settings.
- More data and research on psychological distress in LMICs among different demographic groups is needed to better understand mental health trends over time and the impact of COVID-19 on mental health. This analysis was limited to four months and did not have pre-pandemic data to use as a comparison. Furthermore, survey respondents were more likely to be male, younger than 45 years, and have obtained a college or advanced degree. More investment in mental health research in LMICs can help ensure actions undertaken to support mental health and well-being are informed by representative data.

Table 2. Percentage of People Reporting Food Insecurity or Economic Stress Between June and September 2021

	Percent very or somewhat worried about having enough to eat in the next week				Percent very or somewhat worried about their household's finances in the next month			
	June	July	Aug.	Sep.	June	July	Aug.	Sep.
Bangladesh	32.1%	33.3%	32.0%	26.1%	53.2%	53.3%	53.7%	46.8%
Burkina Faso	29.6%	38.9%	38.0%	35.7%	44.6%	54.7%	56.2%	58.1%
Côte d'Ivoire	39.1%	41.6%	37.9%	37.2%	55.0%	58.6%	56.7%	55.9%
DR Congo	36.2%	40.9%	44.7%	37.3%	63.4%	60.7%	58.8%	56.8%
Egypt	20.3%	19.4%	20.7%	21.3%	48.5%	45.1%	49.1%	49.7%
Ethiopia	24.4%	23.7%	27.5%	27.0%	41.6%	40.4%	43.3%	40.2%
Ghana	34.5%	36.6%	33.2%	35.2%	54.1%	56.9%	55.2%	53.6%
Guatemala	39.3%	40.1%	39.8%	39.8%	60.1%	61.1%	61.8%	58.8%
Guinea	43.3%	32.5%	51.6%	47.0%	57.2%	52.5%	58.3%	59.3%
India	22.4%	20.3%	19.4%	17.7%	46.0%	42.3%	41.5%	39.7%
Indonesia	32.3%	41.0%	41.4%	37.3%	46.4%	55.7%	54.7%	51.3%
Jordan	27.8%	29.3%	31.4%	33.4%	61.9%	62.1%	63.2%	62.7%
Kenya	56.5%	53.3%	51.3%	51.4%	71.5%	69.4%	67.6%	67.9%
Mali	42.2%	40.4%	46.0%	41.8%	58.1%	60.1%	58.6%	66.5%
Mozambique	43.3%	49.3%	44.0%	48.9%	60.5%	65.6%	58.0%	68.1%
Nepal	27.9%	24.6%	24.6%	18.4%	54.4%	50.5%	50.1%	46.0%
Nigeria	52.5%	52.6%	53.0%	52.1%	67.2%	63.6%	68.3%	65.1%
Pakistan	17.5%	17.5%	19.4%	18.1%	38.8%	40.2%	42.6%	41.6%
Philippines	45.4%	43.3%	45.3%	43.9%	62.6%	60.7%	63.4%	62.1%
Senegal	29.7%	27.1%	31.1%	28.1%	57.8%	50.8%	54.2%	48.0%
South Africa	34.9%	36.6%	31.8%	31.2%	59.0%	60.1%	56.8%	54.4%



This table presents monthly weighted percentages of people reporting economic distress. Each numeric value is accompanied by a color to demonstrate how it compares to other values in the table. Green shades indicate values are near the minimum value of the table. Yellow-green, yellow, and orange shades indicate values are near the median value of the table. Dark orange and red shades indicate values are near the maximum value of the table.

These results call for additional resources for and widespread availability of mental health and social protection programs now and after the COVID-19 pandemic is over.



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