

## BRIEF

### Purpose

- To describe the range of phone survey tools used to measure household food security during the COVID-19 pandemic in India
- To propose a common set of food security measurement questions for use in phone and in-person surveys

### Why focus on food security measurement?

- Food security is “a situation that 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.” (*World Food Summit, 1996*) This globally accepted definition of food security includes concepts of **availability, access, and utilization**.
- Measurement of food security can support identification of vulnerable populations and enable cost-effective targeting by policies and programs.
- Several food security data collection tools are available for use (Table 1). They vary in the domains related to food insecurity that they capture, including uncertainty, access to food and resources related to food, compromised dietary quality, eating less, going hungry and coping behaviours.
- Challenges related to the use of different available food security data collection tools include the following: 1) each tool captures a subset of food insecurity domains, 2) some tools can capture past experience but can also be forward looking, 3) difference in domains and variability in questions asked to measure food security create comparability challenges.

Table 1: Global tools and food security experience domains captured by the tool

Key Domains	FIES	HFIAS	HHS	FCS	CSI	HFSSM
Uncertainty and anxiety regarding food access	✓	✓	✓			✓
Quantity/ Quality of food consumed	✓	✓				✓
Food deprivation, hunger			✓			
Diet diversity				✓		
Coping behaviors, strategies		✓			✓	✓
Access to food, resources				✓		✓

Notes: FIES- Food Insecurity Experience Scale; HFIAS- Household Food Insecurity Access Scale; HHS- Household Hunger Scale; FCS- Food Consumption Score; CSI- Coping Strategies Index; HFSSM- Household Food Security Survey Module.

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## Context: Measurement of food security in India during COVID-19

- In March 2020 India announced a national lockdown to control the spread of COVID-19. The lockdown stalled economic activity and affected households in diverse ways.
- Starting in April 2020, researchers across India began implementing phone surveys to characterize household level impacts on incomes, food security, livelihoods, and related outcomes.
- A network of researchers was brought together under the [CORE Net](#) (Covid Research Network) umbrella in May 2020. A key goal of CORE Net was to facilitate sharing of research findings and methodological insights from diverse data collection efforts across sectors.
- In June 2020, a nutrition and food security sub-group of the CORE Net network was initiated. The food security and nutrition group agreed to work together towards more harmonized methods for measuring food security. A first step in this was to systematically review the various tools used by researchers across the network.
- A key motivation for the review of food security measurement was that diverse studies pointed to food crises during the early lockdown period in India<sup>1</sup>. However, a comparison of findings across studies was challenging due to variability in methods used to measure food insecurity.

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## Methods

- We reviewed 15 questionnaires from 11 research organizations that conducted phone surveys in India between April-September 2020 (lockdown period). All 15 questionnaires included questions related to food security.
- We categorized individual questions across questionnaires by the domain of food security captured (Table 2).
- We documented which of the global food security tools each question related to, and whether the global tool had been adapted in any way.
- We directly verified with each research team whether and how they used the global tools with a special focus on any adaptations made for phone-based interviews.

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## Key findings from questionnaire review

- **Finding #1:** Most of the surveys capturing food security in the Indian context had **adapted either the FIES or the HFIAS tools**. A few also framed their **own unique questions**.  
Examples include:
  - Did non-availability of any item of immediate necessity including food, cause you distress?
  - Do you feel that the nutritional quality of food that your household consumes now has changed from what it was before the national lockdown began in March 2020 (pulses, vegetables, eggs, fish, meat, etc.)?
- **Finding #2: Access to food or resources** was the most measured domain; questions reflected source of food, quantity procured through government schemes, and barriers to access. **Actual consumption or change in quantity and quality of food consumed** was measured by a few research teams. **Food deprivation, coping behaviors, or uncertainty** around food consumption were the least likely to be measured.
- **Finding #3:** There were differences **in the recall period and framing of questions** across surveys. Some surveys asked about the past 7 days or 30 days; others framed the question as either “during lockdown” or “since lockdown”.
- **Finding #4:** Research teams made **adaptations to the validated tools** to accommodate phone surveys. Examples include the following:
  - Research teams framed questions using simple words, easy vocabulary, and clear framing of sentences:
    - Before the lockdown, in say February, did any member of your household ever have to skip meals?

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<sup>1</sup> Drèze, J and A Somanchi (2021), “The Covid-19 crisis and people’s right to food”, SocArXiv, 31 May.

- On average, are children between the age of 1-6 years eating more, less, or the same amount of fruits and vegetables now as they were before the lockdown?
  - Research teams adapted questions to shorter recall periods or directly refer to the COVID-19 lockdown period:
    - In the **past 7 days**, did you or household member reduce the number of meals and/or the portion of each meal we would usually eat?
    - **Since the lockdown**, has there been any time when you or others in your household did not have enough food to eat because of lack of money or other resources? or Do you think **the coronavirus lockdown** has altered your eating habits in any manner?
  - Some research teams reduced the number of questions asked in the global tools. For example, using 4-5 questions from the FIES questionnaire instead of the full set of 8 questions.

Table 2: Mapping of survey questions by India researchers to food security domains

Key Domains	NCAER- (R3)	CEGIS	IDInsight (R1 & R2)	IGC	Population Council	Hunger Watch Survey
	(Individual & Household)	(Individual)	(Individual)	(Household)	(Household)	(Household)
Uncertainty and anxiety regarding food access			✓ (1)			✓ (1)
Quantity/quality of food consumed	✓ (1)		✓ (4)			✓ (5)
Food deprivation, hunger			✓ (1)	✓ (1)	✓ (1)	✓ (3)
Diet diversity						
Coping behaviors, strategies		✓ (2)	✓ (1)			✓ (4)
Access to food, resources general	✓ (1)		✓ (1)	✓ (1)		✓ (4)
Access to food, resources through government sources	✓ (1)	✓ (4)	✓ (2)			✓ (3)

Key Domains	IFPRI	Gram Vaani (3 surveys)	Outline India	Vihara	APU
	(Household)	(Individual & Household)	(Individual)	(Individual)	(Household)
Uncertainty and anxiety regarding food access	✓ (1)	✓ (2)	✓ (1)	✓ (1)	✓ (1)
Quantity/quality of food consumed	✓ (4)	✓ (1)			
Food deprivation, hunger	✓ (4)			✓ (2)	
Diet diversity	✓ (1)	✓ (1)			
Coping behaviors, strategies	✓ (1)				
Access to food, resources general		✓ (1)	✓ (10)	✓ (2)	✓ (2)
Access to food, resources through government sources		✓ (10+)	✓ (3)		✓ (2)

Notes: number in brackets indicate the number of questions asked in a particular domain. NCAER: National Council of Applied Economic Research; CEGIS: Centre for Effective Governance of Indian States; IGC: International Growth Centre; IFPRI: International Food Policy Research Institute; APU: Azim Premji University.

## A way forward to harmonize measurement of food security in India

- Based on our review, we suggest that the following set of standard questions from the FIES and CSI be used for food security measurement in India. Use of standard questions will allow for comparable data over location and time and support collaborative analyses across research groups. Researchers can use these questions for a general assessment of food security as well as during emergencies. These questions have been reviewed for application in phone surveys and we provide some guidelines on application to phone surveys in Table 3.
- We suggest using the questions below in ongoing/upcoming surveys along with complementary questions that may affect individual food security. Complementary questions may include food consumption, income/poverty indicators, demographics, shocks and coping behaviour, and participation in government programs. Box 1 summarizes some issues for consideration in analyses.

Table 3: Suggestive questions for measuring food security

Questions	Response options
<p><b>During the last X<sup>2</sup> days, was there a time when, because of lack of money or other resources:</b></p> <ol style="list-style-type: none"> <li>You or any member of household, were worried you would not have enough food to eat?</li> <li>You or any member of household, were unable to eat healthy and nutritious food?</li> <li>You or any member of household, ate only a few kinds of foods?</li> <li>You or any member of household, had to skip a meal?</li> <li>You or any member of household, ate less than you thought you should?</li> <li>Your household ran out of food?</li> <li>You or any member of household, were hungry but did not eat?</li> <li>You or any member of household, went without eating for a whole day?</li> </ol> <p><b>Suggestion for adaptation:</b> It is preferable to include all 8 questions to ensure comparability with global food insecurity metrics. However, if the length must be reduced, leave out questions 8, 3 and 6 (in that order of preference). For recall period see notes.</p> <p>Source: FAO's Food Insecurity Experience Scale (FIES)</p>	Yes/No/Don't know/NA.
<p><b>During the past X days, did anyone in your household have to engage in any of the following behaviors due to a lack of food or a lack of money to buy food or meet other basic needs? Select Multiple</b></p> <ol style="list-style-type: none"> <li>Rely on less preferred and less expensive foods?</li> <li>Borrow food, or rely on help from a friend or relative?</li> <li>Purchase food on credit?</li> <li>Send household members to eat elsewhere?</li> <li>Send household members to beg?</li> <li>Restrict consumption by adults in-order for small children to eat?</li> <li>Feed working members of HH at the expense of non-working members?</li> <li>Sell assets</li> </ol> <p>Source: WFP's Coping Strategies Index (CSI)</p>	Yes/No/Don't know/NA.
<p><b>During the past X days, have you received any information about government relief or received government relief? Select Multiple</b></p> <ol style="list-style-type: none"> <li>Not aware of any relief measures</li> <li>Aware of relief, but not received any relief</li> <li>School meals delivered at home</li> <li>Take home rations for pregnant/lactating mothers and young children</li> <li>Free food rations for household (from PDS shop)</li> <li>Free food rations (not from PDS shop)</li> <li>Cooked food</li> <li>Gas cylinders</li> <li>Cash transfers to bank account</li> <li>96. Other</li> </ol>	Yes/No/Don't know/NA.

<sup>2</sup> Researchers have a choice to select the recall period between 30 days or 12 months. The FIES suggests using 12 months recall for comparability across geographies and 30 days to identify risk factors and consequence of food security. 7-day recall has also been used by researchers as an adaptation during COVID survey, but it is not suggested by the FIES. Read more about application of FIES in surveys [here](#).

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## Box 1: Using the collected data

The collected data from these questions can be used in several ways and depends on the objective of the study. If the intent is to make cross country comparisons using the FIES, then the individual response should be combined to compose a scale. For within country analysis and tracking temporal changes, a food security score can be generated as a sum of individual responses at the individual or household level. An analyst may also create a gradient using the food security score. The responses to CSI and government relief question can be used to inform observed food security experiences as coping behavior and available safety net programs. For more details on analysis, see [here](#) and [here](#).

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## Conclusion

Continuous and standardized measurement of food security is critical to identify vulnerable populations and for better implementation of policies and programs in countries. The availability of various food security metrics for data collection poses its challenges due to various reasons. To harmonize data collection on food security measurement in India, we propose a set of standard questions from the FIES and CSI which would allow to fill data gaps and provide comparable data over location and time.

Looking forward, we hope that researchers measuring food security in low-middle income countries and during extreme events such as the pandemic, can coordinate efforts towards strengthening measurement for a systematic response towards improving food security.

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## Acknowledgements

We are grateful to the following CORE Net members for providing access to their questionnaires/tools, reviewing the proposed set of questions, and their overall support: Right to Food Campaign, Gram Vaani, Outline India, Vihara Innovation Network, Azim Premji University, NCAER National Data Innovation Centre, CEGIS, IDInsight, International Growth Centre (IGC), and Population Council.

We would also like to thank CORE Net Secretariat team—Maya Seetharaman, Shruti Jagirdar, Rohan Patankar, Ayushi Biyani—for providing support in coordination and are thankful to Dr. Edward A. Frongillo, Dr. Rebecca Heidkamp and members from Gram Vaani, Vihara, Outline India, and NCAER for their insights and comments on the proposed set of questions.

The COVID-19 Research Network or CORE Net, is an effort to build a community of practice to foster exchange and collaboration among research organisations gathering information on issues relevant to the COVID-19 pandemic in India. CORE Net began in May 2020, as an effort to build a community of practice for researchers working on COVID-19 related studies to maximise impact for research uptake and improve the quality of research practice in terms of ethics and equity. Since then, the network has grown to 50 different research organisations (primarily social science researchers).

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## Suggested Citation

Singh. N., M. Jangid, S. Kim, P. Menon. 2021. Measuring food security in the context of COVID-19 in India: A review of measurement tools and adaptations to phone-based data collection. New Delhi: DataDENT / International Food Policy Research Institute.

**Project Note:** This analysis was led by International Food Policy Research Institute (IFPRI) as part of the Data for Decisions to Expand Nutrition Transformation (DataDENT) initiative. DataDENT is a four-year initiative (2017-2021) that aims to transform the availability and use of nutrition data by addressing gaps in nutrition measurement and advocating for stronger nutrition data systems. DataDENT is funded by the Bill & Melinda Gates Foundation, and is implemented by three institutions: Institute for International Programs (IIP) at the Johns Hopkins Bloomberg School of Public Health, the International Food Policy Research Institute (IFPRI), and Results for Development (R4D).

