

### About the Measure

<b>Domain:</b>	Social Determinants of Health
<b>Measure:</b>	Food Insecurity
<b>Definition:</b>	Food insecurity measures the availability, accessibility, and affordability of nutritionally adequate food.
<b>Purpose:</b>	Food insecurity can lead to hunger and/or malnutrition.
<b>Essential PhenX Measures:</b>	None
<b>Related PhenX Measures:</b>	Food Swamps, Community Food Security, Healthy Food Environments
<b>Measure Release Date:</b>	

### About the Protocol

<b>Protocol Release Date:</b>	
<b>PhenX Protocol Name:</b>	Food Insecurity
<b>Keywords:</b>	Food security, food insecurity, hunger, financial resource constraint
<b>Protocol Name from Source:</b>	Six-Item Standard Measure from USDA Economic Research Service
<b>Description:</b>	The Six-Item Standard Measure from USDA Economic Research Service is a short interviewer-administered questionnaire, modeled using information from the Community Population Survey, Bureau of Labor Statistics, and American Community Survey.
<b>Specific Instructions:</b>	None
<b>Protocol:</b>	<p><b>Six-Item Standard Measure from USDA Economic Research Service</b></p> <p>1. I'm going to read you two statements that people have made about their food situation. Please tell me whether the statement was <b>OFTEN</b>, <b>SOMETIMES</b>, or <b>NEVER</b> true for (you/you and the other members of your household) in the last 12 months.</p>

The first statement is, "The food that (I/we) bought just didn't last, and (I/we) didn't have money to get more." Was that often, sometimes, or never true for (you/your household) in the last 12 months?

- 1 Often true
- 2 Sometimes true
- 3 Never true
- Don't know
- Refused

2. "(I/we) couldn't afford to eat balanced meals." Was that often, sometimes, or never true for (you/your household) in the last 12 months?

- 1 Often true
- 2 Sometimes true
- 3 Never true
- DK
- R

3. In the last 12 months, since (date 12 months ago) did (you/you or other adults in your household) ever cut the size of your meals or skip meals because there wasn't enough money for food?

- 1 Yes
- 2 No (GO TO 5)
- DK (GO TO 5)
- R (GO TO 5)

Optional Screener: If any of the first 3 questions are answered affirmatively (i.e., if either Q1 or Q2 are "often true" or "sometimes true" or Q3 is "yes"), proceed to the next question. Otherwise, skip to end.

3a. [Ask only if Q3 = YES] How often did this happen --almost every month, some months but not every month, or in only 1 or 2 months?

- 1 Almost every month
- 2 Some months but not every month
- 3 Only 1 or 2 months
- DK
- R
- X (i.e., Question not asked because of negative or missing response to Q3).]

4. In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money to buy food?

- 1 Yes
- 2 No
- DK
- R

5. In the last 12 months, were you ever hungry but didn't eat because you couldn't afford enough food?

- 1 Yes
- 2 No

DK  
 R

END

It may be noted that this set of six items constitutes the full set of adult items within the intermediate range of severity captured by the full scale derived from the core module. This particular set has been shown to be the strongest available 6-item set, across households both with and without children, for achieving the most accurate classification, in relation to the full-scale-based classification of household food security status, up through this intermediate range of severity. This intermediate severity range identifies households reporting hunger experiences, but without capturing the further detail that identifies the most severe scale range required to identify children's hunger. For households that reach this level of severity captured by the standard 6-item set, however (i.e., "food insecure with evidence of hunger"), the classification does provide a reliable indicator of high risk of children's hunger within the household, in the sense that the probability that children in such households have experienced hunger is much greater than for other children.

Guide to Measuring Household Food Security -- 200061TRANSITION/LEADER.

If the placement of items in your survey makes the transitional or introductory sentence unnecessary, you may add the word "Now" to the beginning of question 1: "Now I'm going to read you...." FILL INSTRUCTIONS.

Select the appropriate fill from parenthetical choices depending on the number of persons and number of adults in the household. If this information is unknown, or very few single-adult households are included in your sample, the plural forms may be used throughout.

#### USING AN INTERNAL SCREENER.

The 6-item set can be used with an optional internal screener, comparable to the first-level internal screen used in the 18-item core module. Testing has shown that a screen placed after the first three questions in the 6-item sequence causes a negligible misclassification of food-insecure households (false negative classifications). The procedure results in a 0.2 percent reduction in the number of households identified as food insecure without hunger and a zero loss of households identified as food insecure with hunger--i.e., this screen has no effect on the power of the scale to classify households with hunger.

#### CODING THE DATA FOR SCALING.

- Responses of "often" or "sometimes" on questions 1 and 2, and "yes" on 3, 4, and 5 are coded as affirmative (yes).
- Responses of "almost every month" and "some months but not every month" on 3a are coded as affirmative (yes).
- The sum of affirmative responses to the six questions in the module is the household's raw score on the scale.

MISSING VALUES. Missing values as the result of item nonresponse ("Don't know" or Refused) may be handled the same way in scoring the standard 6-item data sets as in scoring the full core-module data (Guide to Measuring Household Food Security, Chapter 3 "Imputing Missing Values for Households with Incomplete Responses").

Food security status is assigned as follows:

- Raw score 0-1—High or marginal food security (raw score 1 may be considered marginal)
- food security, but a large proportion of households that would be measured as having marginal food security using the household or adult scale will have raw score zero on the six-item scale)
- Raw score 2-4—Low food security
- Raw score 5-6—Very low food security

For some reporting purposes, the food security status of households with raw score 0-1 is described as food secure and the two categories “low food security” and “very low food security” in combination are referred to as food insecure.

For statistical procedures that require an interval-level measure, the following scale scores, based on the Rasch measurement model may be used:

Number of affirmatives	Scale score
0	NA
1	2.86
2	4.19
3	5.27
4	6.30
5	7.54
6 (evaluated at 5.5)	8.48

However, no interval-level score is defined for households that affirm no items. (They are food secure, but the extent to which their food security differs from households that affirm one item is not known.)

<b>Selection Rationale:</b>	The Six-Item Standard Measure from USDA Economic Research Service is a validated, well-established measure of food insecurity which is easy to administer and score.
<b>Source:</b>	United States Department of Agriculture (USDA), Economic Research Service, Six-Item Short Form of the Food Security Survey Module, Questions 3, 4, 8, 8a, 9 and 10, 2012. Available from <a href="https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/survey-tools/">https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/survey-tools/</a>
<b>Availability:</b>	Publicly available
<b>Life Stage:</b>	Adult

<b>Language:</b>	English
<b>Participant:</b>	Adult
<b>Personnel and Training Required:</b>	<p>The interviewer must be trained to conduct personal interviews with individuals from the general population. The interviewer must be trained and found to be competent (i.e., tested by an expert) at the completion of personal interviews. The interviewer should be trained to prompt respondents further if a “don’t know” response is provided.</p> <p>In general, the USDA recommends that any local group planning a food security survey seek to work cooperatively with university or other resource persons experienced in sample-survey work. Numerous sampling methods are available that are feasible and that can yield meaningful results, but expertise is needed to design these methods into your planned survey.</p>
<b>Equipment Needs:</b>	<p>The PhenX Working Group acknowledges these questions can be administered in a computerized or noncomputerized format (i.e., paper-and-pencil instrument). Computer software is necessary to develop computer-assisted instruments. The interviewer will require a laptop computer/handheld computer to administer a computer-assisted questionnaire.</p>
<b>General References:</b>	<p>Blumberg, S. J., Bialostosky, K., Hamilton, W. L., &amp; Briefel, R. R. (1999). The effectiveness of a shortform of the household food security scale. <i>American Journal of Public Health</i>, 89, 1231-34.</p> <p>Gundersen C, Ziliak JP. Food Insecurity and Health Outcomes. <i>Health Affairs</i>. Nov 2015;34(11).</p> <p>Jones AD, Ngure FM, Pelto G, Young SL. What Are We Assessing When We Measure Food Security? A Compendium and Review of Current Metrics. <i>Adv Nutr</i>. 2013 Sep; 4(5): 481–505. PMID: 24038241</p> <p>Lee J. S. (2013). Food insecurity and healthcare costs: research strategies using local, state, and national data sources for older adults. <i>Advances in nutrition (Bethesda, Md.)</i>, 4(1), 42-50.</p> <p>Murthy VH. Food Insecurity. A Public Health Issue. <i>Public Health Rep</i>. 2016 Sep-Oct; 131(5): 655–657. PMID: 28123203</p> <p>National Research Council. <i>Measuring Food Insecurity and Hunger: Phase 1 Report</i>. Washington, DC: The National Academies Press, 2005.</p>
<b>Mode of Administration:</b>	<p>Interviewer-administered questionnaire Self-administered questionnaire</p>

<b>Derived Variables:</b>												
<b>Requirements:</b>	<table border="1" data-bbox="407 344 1328 680"> <thead> <tr> <th data-bbox="407 344 1029 422"><b>Requirements Category</b></th> <th data-bbox="1029 344 1328 422"><b>Required (Yes/No):</b></th> </tr> </thead> <tbody> <tr> <td data-bbox="407 422 1029 478">Major equipment</td> <td data-bbox="1029 422 1328 478">No</td> </tr> <tr> <td data-bbox="407 478 1029 531">Specialized training</td> <td data-bbox="1029 478 1328 531">No</td> </tr> <tr> <td data-bbox="407 531 1029 604">Specialized requirements for biospecimen collection</td> <td data-bbox="1029 531 1328 604">No</td> </tr> <tr> <td data-bbox="407 604 1029 680">Average time of greater than 15 minutes in an unaffected individual</td> <td data-bbox="1029 604 1328 680">No</td> </tr> </tbody> </table>		<b>Requirements Category</b>	<b>Required (Yes/No):</b>	Major equipment	No	Specialized training	No	Specialized requirements for biospecimen collection	No	Average time of greater than 15 minutes in an unaffected individual	No
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Major equipment	No											
Specialized training	No											
Specialized requirements for biospecimen collection	No											
Average time of greater than 15 minutes in an unaffected individual	No											
<b>Annotations for Specific Conditions:</b>	No annotations at this time.											
<b>Process and Review:</b>	Not applicable.											