

Income-Related Household Food Insecurity

MEASURING TOOL

KNOWLEDGE TRANSLATION

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This document is part of the [Toolbox for Carrying Out a Food Access Diagnostic and Evaluating the Effects of a Food Cooperative](#), developed as part of the EffICAS study conducted by the Institut national de santé publique du Québec. One of the main goals of this toolkit is to help stakeholders draw up a diagnostic portrait—a snapshot at a given point in time—of people’s food access and to assess the effects of a food cooperative on individuals and communities.

More specifically, this tool for measuring food insecurity linked to household income determines the proportion of respondents with inadequate or uncertain access to foods of high nutritional value due to a lack of money.

It is essential to focus on food insecurity linked to household income, as it negatively affects not only the diet quality, but also the physical and mental health of individuals living in this situation (Plante et al., 2021; Tarasuk et al., 2022).

DEFINITION AND SOURCE

Food insecurity corresponds to an inadequate or uncertain access to nutritious foods, mainly due to a lack of financial resources.

The tool used to measure food insecurity linked to household income in the EffICAS study is taken from the Household Food Security Survey Module (HFSSM) of the Canadian Community Health Survey (CCHS) (Health Canada, 2007, 2010; Statistics Canada, 2019). Only questions related to measuring insecurity among adults in the household were used in the study.

It should be noted that there is a distinction between the concept of food insecurity linked to household income and the concept of food security at the community level. The indicator measured in this tool is primarily related to the income available to a household to feed itself, whereas community food security integrates several aspects: availability, access, utilization, stability, agency, and sustainability. Indeed, the Food and Agriculture Organization of the United Nations states that community-level food security “exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life” (High Level Panel of Experts on Food Security and Nutrition of FAO, 2020).

QUESTIONNAIRE

The questionnaire used to measure income-related food security among the adults in EffICAS study is as follows:

- The questions are divided into three blocks, each describing different levels of food insecurity. The first block is mandatory for all respondents, and the next two are each conditional on the answers given in the previous block (i.e., block 2 is conditional on the answers in block 1, and block 3 is conditional on the answers in block 2).
- The first block consists of an introductory sentence, a set of instructions, and three (3) mandatory questions with the same response scale.
- The second block consists of an introductory sentence, four (4) mandatory questions (yes or no answers), and a conditional question linked to one of them.
- The third block consists of a mandatory question and a conditional question.

BLOCK 1

Introduction: The following questions are about the food situation for your household in the past 12 months.

Instructions: Indicate whether the following statements are OFTEN true, SOMETIMES true or NEVER true for you and other members of your household in the last 12 months.

Questions:

1. You worried that food would run out before you got money to buy more.
2. The food that you bought just didn't last, and there wasn't any money to get more.
3. You couldn't afford to eat balanced meals.

Choice of answer and associated values: Scale to be used for all three questions.

1. Often true
 2. Sometimes true
 3. Never true
- 99 Don't know / Refused to answer

CONDITION: If Q1 = often or sometimes OR Q2 = often or sometimes OR Q3 = often or sometimes, go to block 2. Otherwise, the questionnaire ends.

BLOCK 2

Introduction: The following questions concern the food situation over the past 12 months for **you or any other adults** in your household.

Questions, answer choices, and associated values:

4. In the past 12 months, did 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
 - 99- Don't know / Refuse to answer

CONDITION: If the answer to question 4 is yes, ask question 5, otherwise go to question 6.

5. How often did this happen?
- 1- Almost every month
 - 2- Some months, but not every month
 - 3- 1 or 2 months only
 - 99- Don't know / Refuse to answer
6. In the past 12 months, did you (personally) ever eat less than you felt you should because there wasn't enough money to buy food?
- 1- Yes
 - 2- No
 - 99- Don't know / Refuse to answer
7. In the past 12 months, were you (personally) ever hungry but didn't eat because you couldn't afford enough food?
- 1- Yes
 - 2- No
 - 99- Don't know / Refuse to answer
8. In the past 12 months, did you (personally) lose weight because you didn't have enough money for food?
- 1- Yes
 - 2- No
 - 99- Don't know / Refuse to answer

CONDITION: If Q4 = yes or Q6 = yes or Q7 = yes or Q8 = yes, go to block 3. Otherwise, the questionnaire ends.

BLOCK 3

Questions, answer choices, and associated values:

9. In the past 12 months, did you or other adults in your household ever not eat for a whole day because there wasn't enough money for food?
- 1- Yes
 - 2- No
 - 99- Don't know / Refuse to answer

CONDITION: If the answer to question 9 is yes, continue with question 10. Otherwise, the questionnaire ends.

10. How often did this happen?
- 1- Almost every month
 - 2- Some months, but not every month
 - 3- 1 or 2 months only
 - 99- Don't know / Refuse to answer

ADMINISTERING THE QUESTIONNAIRE

The questionnaire is designed to provide an annual measure of food security, since it focuses on situations experienced in the last twelve (12) months. If less than a year separates the two collection periods, this may have an impact on the measurement, and the tool needs to be reconsidered and potentially replaced.

Although easy to configure on a web platform, switching from one question block to another can be complicated when the questionnaire is administered on paper. For the EfflCAS study, the conditions for switching from one block to another were left out of the printed questionnaire; only the two conditions related to the questions about frequency (questions 5 and 10) were included. However, all conditions were retained in the online version of the questionnaire. Thus, when the paper questionnaires were entered, the logic of the questionnaire was respected a posteriori.

PROCESSING AND ANALYSIS

The measurement consists of counting the number of responses considered “affirmative,” i.e., those corresponding to the following answer choices:

- “Often true” or “Sometimes true” (questions 1 to 3)
- “Yes” (questions 4, 6, 7, 8, and 9)
- “Almost every month” or “Some months, but not every month” (questions 5 and 10)

As such, the result is a sum of affirmative responses ranging from 0 to 10. The higher the number of affirmative responses, the more severe the income-related food insecurity of the adults in the household. By grouping the sample of respondents according to intervals on the number of affirmative responses obtained, a breakdown (in number and percentage) into four categories can then be created to present the results of income-related food security.

Table 1 **Categorization of food security among adult household members**

| Number of affirmative responses | Category indicating the food security status of adults in the household |
|--|--|
| 0 | Food security |
| 1 | Marginal food insecurity |
| 2 to 5 | Moderate food insecurity |
| 6 to 10 | Severe food insecurity |

INTERPRETATION

Despite the fact that the unit is called food security, a higher score refers to greater food insecurity. Respondents in the “food security” category do not experience income-related food insecurity. Whereas people in the categories “marginal,” “moderate,” and “severe” food insecurity are experiencing increasingly high levels of food insecurity.

Depending on the household, food insecurity can be transitory or episodic, but also chronic or regular (e.g., every end of the month).

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