Food Insecurity Experience Scale (FIES)

Overview

The Food Insecurity Experience Scale (FIES) is one of the four experience-based food insecurity scales included in the Data4Diets platform, which also contains the Household Hunger Scale [1] (HHS), the Household Food Insecurity Access Scale [2](HFIAS), and the Latin American and Caribbean Food Security Scale [3] (ELCSA). The FIES was developed by the Food and Agriculture Organization (FAO) through the Voices of the Hungry (VoH) project, building on the pioneering work of the HFIAS and the ELCSA. It was derived from the adult-referenced questions of the ELCSA to create a shortened, standardized experience-based measure for use across sociocultural contexts (Ballard et al., 2013 [4]).

In 2014, FAO began collecting FIES data by leveraging the Gallup® World Poll (GWP), which surveys nationally representative samples of the adult population annually in nearly 150 countries. With this data in hand, Voices of the Hungry (VoH) developed the analytical protocols necessary to take experience-based food security measurement global, making it possible to compare prevalence rates across countries and even sub-national populations (Cafiero et al., 2016 [5]).

Method of Construction

The FIES module can be administered with either a 1-month or 12-month recall period, depending on the research or programmatic priorities. It consists of eight questions capturing a range of food insecurity severity, with yes/no responses. While developed primarily to measure the individual experience of food insecurity, the scale can also be modified for use at the household level, in which case the questionnaire can be administered to an individual who responds on behalf of the household. The FIES survey modules (individual and household versions) and translations can be found on the VoH website [6]. The creation of the scale requires a statistical module programmed in R, which can also be found on the VoH website, along with supplemental explanatory materials. Based on output from the model, two indicators are produced: the prevalence of severe food insecurity, and the prevalence of moderate or severe food insecurity (the prevalence of moderate and severe combined).

Uses

The FIES is one of two indicators used for measuring progress toward achieving one of the Sustainable Development Goals (SDGs), Goal 2.1, which relates to ending hunger and ensuring food access (SDGs, 2016 [7]). This indicator is currently used by FAO and a growing number of countries to monitor national and global food security trends.

The FIES can be used to measure food security for the following purposes:

- To **assess** the population **prevalence of food insecurity** (for both SDG monitoring and national use)
- To **identify vulnerable** populations
- To **guide** and **monitor** the effects of food security **policies and programs**
- To **identify risk factors and consequences** of food insecurity

The FIES does not quantify food consumption nor does it assess diet quality; doing so requires other methods and indicators such as a quantitative 24-hour dietary recall [8] to quantify food consumption to calculate the Mean Adequacy Ratio [9] (MAR) or a diet diversity index to determine the Minimum Dietary Diversity Score for Women [10] (MDD-W) in order to gain a picture of the "adequacy" aspect of diet quality.

Strengths and Weaknesses

The main strength of the FIES is that it produces population-level estimates of food insecurity that are comparable across countries, cultures, and sub-populations. The FIES analytical methodology can be applied to data collected using the HFIAS [2] and the ELCSA [3] survey modules to produce comparable results. Additionally, when the individual-referenced survey module is used, the FIES offers the advantage of allowing for disaggregation of data by gender (Brunelli & Viviani, 2014 [11]). The FIES analytical methodology involves a sophisticated probabilistic approach to classify households according to their food security status. Though the results are statistically robust and comparable across countries and sub-populations, it may be challenging for non-specialists to conduct the analysis and produce the estimates. However, this analytic approach makes it possible to account for differences in experiences of food insecurity across specific cultural or personal perceptions. FAO provides tools, including software and learning materials, to support users, as well as technical assistance.

Data Sources

The data required to calculate this indicator are collected using the eight-item FIES survey module (individual or household version), which can be easily integrated into a broader survey of individuals (e.g. a health and nutrition survey) or households (e.g. Household Consumption and Expenditure Survey [12] [HCES]). The FIES survey modules, and translations of the individual version into 170 languages and dialects, can be found on the VoH webpage [13]. Also included on the webpage is the FIES Statistical Software Package for conducting data analysis and producing estimates of the prevalence of food insecurity.

Links to guidelines

- Ballard et al., (2013). "The Food Insecurity Scale: Development of a Global Standard for Monitoring Hunger Worldwide" [14]
- Voices of the Hungry, (2018). "Voices of the Hungry: One Metrix for the World" [15]
- FAO e-learning course, (2018). "SDG Indicator 2.1.2: Using the Food Insecurity Experience Scale" [16]

Links to validation studies

- Cafiero et al., (2016). "Methods for Estimating Comparable Prevalence Rates of Food Insecurity Experienced by Adults Throughout the World" [5]
- Cafiero et al., (2018). "Food Security Measurement in a Global Context: The Food Insecurity Experience Scale" [17]

Expert review conducted by:

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Food Security Dimensions

- Secure access to food of sufficient quantity [19]

Data Collection Levels

- Individual [20]

Data Sources and Methods

- Experience-Based Scales

Requires Food Composition Database

- No [21]