ELCSA: The Latin American & Caribbean Household Food Security Measurement Scale

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Yale University, School of Public Health, USA

McGill Conference on Global Food Security

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Food Security exists when...

“...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”

*1996 World Food Summit, Rome*
Experience-Based Scales
Theoretical Framework

Food Security

Worried about Food Access

Dietary Quality Coping Strategies

Adults Cut Food Consumption

Children Cut Food Consumption

Radimer et al
The Brazilian household food security measurement project
Desenvolvimento Social
Ministério do Desenvolvimento Social e Combate à Fome

Eixos, programas e ações da estratégia Fome Zero

**Fortalecimento da Agricultura Familiar**
- Programa Nacional Agricultura Familiar
- Seguro da Agricultura Familiar
- Garantia Safra
- Programa Aquisição de alimentos (PAA)

**Acesso ao alimento**
- BOLSA FAMILIA
- Alimentação escolar (PNAE)
- Alimentação do trabalhador (PAT)
- Desoneração de impostos da Cesta Básica
- Construção de cisternas no semi-árido
- Restaurantes Populares / Bancos de Alimentos
- Agricultura Urbana / Hortas Comunitárias
- Cestas de Alimentos para grupos específicos
- Alimentação Saudável / Promoção de hábitos saudáveis
- Distribuição de Vitamina A e de Ferro
- Alimentação e nutrição dos povos indígenas
- Educação alimentar e nutricional / SISVAN

**FOME ZERO**

**Geração de renda**
- Qualificação social e profissional
- Economia Solidária e inclusão produtiva
- Consórcios SAN (CONSAOs)
- Organização produtiva - PRODUZIR
- Desenvolvimento de cooperativas de catadores
- Micro-crédito produtivo orientado

**Articulação, mobilização controle social**
- Casa das Famílias (CRAS/PAIF)
- Educação cidadã e mobilização social
- Capacitação de agentes públicos
- Mutirões e doações
- Parcerias com empresas e entidades
- Conselhos de controle social
<table>
<thead>
<tr>
<th>Item</th>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>During the last 3 months… were you worried that you would run out of food before being able to buy or receive more food?</td>
</tr>
<tr>
<td>2</td>
<td>did you run out of food before having money to buy more?</td>
</tr>
<tr>
<td>3</td>
<td>did you run out of money to have a healthy and varied diet?</td>
</tr>
<tr>
<td>4</td>
<td>did you have to consume just a few foods because you ran out of money?</td>
</tr>
<tr>
<td>5</td>
<td>were you unable to offer your children/adolescents a healthy and varied diet because you didn’t have enough money?</td>
</tr>
<tr>
<td>6</td>
<td>did any of the children/adolescents didn’t eat enough because there wasn’t enough money to buy food?</td>
</tr>
<tr>
<td>7</td>
<td>did you or any adult in your household ever reduced the size of meals or skipped meals because there wasn’t enough money to buy food?</td>
</tr>
<tr>
<td></td>
<td>Question</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------------------------------------</td>
</tr>
<tr>
<td>8</td>
<td>did you ever eat less than what you thought you should because there wasn’t enough money to buy food?</td>
</tr>
<tr>
<td>9</td>
<td>did you ever feel hungry but didn’t eat because there wasn’t enough money to buy food?</td>
</tr>
<tr>
<td>10</td>
<td>did you lose weight because you didn’t have enough money to buy food?</td>
</tr>
<tr>
<td>11</td>
<td>did you or any other adult in your household ever went without eating for a whole day or just had one meal in a whole day because there wasn’t enough money to buy food?</td>
</tr>
<tr>
<td>12</td>
<td>did you ever reduced the size of meals of your children/adolescents because there wasn’t enough money to buy food?</td>
</tr>
<tr>
<td>13</td>
<td>did your children/adolescents ever had to skip a meal because there wasn’t enough money to buy food?</td>
</tr>
<tr>
<td>14</td>
<td>were your children/adolescents ever hungry but you just couldn’t buy more food?</td>
</tr>
<tr>
<td>15</td>
<td>did your children remained without food for a whole day because there wasn’t enough money to buy food?</td>
</tr>
</tbody>
</table>
Internal Consistency

- Campinas: 0.91
- Brasilia: 0.91
- Joao Pessoa: 0.94
- Manaus: 0.95
Severe Food Insecurity by Household Income
<table>
<thead>
<tr>
<th>Food Items</th>
<th>Campinas</th>
<th>Brasilia</th>
<th>JPessoa</th>
<th>Manaus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fruits</td>
<td>●●</td>
<td>●●</td>
<td>●●</td>
<td>●●</td>
</tr>
<tr>
<td>Veggies</td>
<td>●●</td>
<td>●●</td>
<td>●●</td>
<td>●●</td>
</tr>
<tr>
<td>Meat</td>
<td>●●</td>
<td>●●</td>
<td>●●</td>
<td>●●</td>
</tr>
<tr>
<td>Milk</td>
<td>●●</td>
<td>●●</td>
<td>●●</td>
<td>●●</td>
</tr>
<tr>
<td>Cereals</td>
<td>○○</td>
<td>○○</td>
<td>●●</td>
<td>○○</td>
</tr>
<tr>
<td>Beans</td>
<td>○○</td>
<td>○○</td>
<td>●●</td>
<td>○○</td>
</tr>
<tr>
<td>Eggs</td>
<td>○○</td>
<td>○○</td>
<td>●●</td>
<td>○○</td>
</tr>
</tbody>
</table>
Validation of the USDA food insecurity module for rural areas in the state of São Paulo, Brazil: Findings from the qualitative phase

Maria de Fátima Archanjo Sampaio,¹,² Anne W. Kepple,¹ Julieta T. A. Oliveira,² Ana Maria Segall Corrêa,¹ Sonia M.P.P. Bergamasco² and Rafael Pérez-Escamilla³

1. Departamento de Medicina Preventiva e Social - Faculdade de Ciências Médicas - UNICAMP
2. Departamento de Planejamento e Desenvolvimento Rural Sustentável - Faculdade de Engenharia Agrícola - UNICAMP
3. University of Connecticut - UCONN
Conclusions

• Results replicated in rural areas in Amazonia, Sao Paulo, Goias, Mato Grosso and Joao Pessoa with similar results.

• Strong scientific and political support for incorporation of module into Brazilian national surveys
  • Health and nutrition
  • Socio-economic
EBIA Applications

- PNAD- 2004
- PNDS- 2006
- PNAD- 2009
- Explosion of FI research in Brazil
  - Nutrition indicators
  - Health outcomes
  - Mental Health
  - Domestic violence
Why and how ELCSA came to be?
Why?

• Excellent psychometric behavior and high predictive and convergence validity of experiential FI scales

• Need to standardize measurement in LAC Region
  — Monitoring and evaluation
  — Academic research
  — Decision making

• Enthusiasm from academicians, FAO, PAHO, and governments
Brazil, 2003
EBIA

Colombia
2003

USA, 1995
HFSSM

FANTA-HFIAS

ELCSA, 2007
ELCSA Scientific Steering Committee

- Ana Maria Segall-Correa, University of Campinas, Brazil
- Martha Cecilia Alvarez Uribe, University of Antioquia, Colombia
- Hugo Melgar-Quiñonez, Ohio State
- Rafael Pérez-Escamilla, Yale University

Household Food Insecurity Is Associated with Childhood Malaria in Rural Haiti$^{1,2}$

Rafael Pérez-Escamilla,$^{3,6,*}$ Michael Dessalines,$^3$ Mousson Finnigan,$^4$ Helena Pachón,$^5$ Amber Hromi-Fiedler,$^3$ and Nishang Gupta$^3$

$^3$University of Connecticut, Storrs, CT 06269; $^4$Organization for the Rehabilitation of the Environment, Camp Perrin, Haiti; $^5$Centro Internacional de Agricultura Tropical, Cali, Colombia; and $^6$Office of Community Health, Yale School of Public Health, New Haven, CT 06510
<table>
<thead>
<tr>
<th>Item</th>
<th>% Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Questions referring to respondent and/or other adults in the household: During the last 3 mo...</strong></td>
<td></td>
</tr>
<tr>
<td>Were you worried about running out of food?</td>
<td>72.5</td>
</tr>
<tr>
<td>Did your home run out of food at any time?</td>
<td>88.9</td>
</tr>
<tr>
<td>Was your home unable to eat at any time the kind of foods that make you healthy?</td>
<td>71.9</td>
</tr>
<tr>
<td>Did you or anybody in your home usually have to eat the same foods almost every day?</td>
<td>64.7</td>
</tr>
<tr>
<td>Was there any day that you or any other adult in your home skipped a meal because of lack of food?</td>
<td>60.1</td>
</tr>
<tr>
<td>Did any adult in your home eat less food than what they needed because there wasn’t enough food?</td>
<td>70.6</td>
</tr>
<tr>
<td>Was there any day when you or any other adult in your home felt hungry but did not eat because there wasn’t enough food?</td>
<td>58.8</td>
</tr>
<tr>
<td>Was there any day when you or any other adult in your home didn’t eat for a whole day or just ate once during the day because there wasn’t enough food?</td>
<td>63.4</td>
</tr>
<tr>
<td>Did you do things that you would have preferred not to do, such as begging or sending children to work, to get food?</td>
<td>13.1</td>
</tr>
<tr>
<td><strong>Questions referring to children in the household: During the last 3 mo...</strong></td>
<td></td>
</tr>
<tr>
<td>Were you unable to provide the children in your home with the kinds of foods they need to be healthy?</td>
<td>56.2</td>
</tr>
<tr>
<td>Did any children in your home usually have to eat the same foods almost every day?</td>
<td>61.4</td>
</tr>
<tr>
<td>Did any child in your home eat less food than what s/he needed because there wasn’t enough food?</td>
<td>77.8</td>
</tr>
<tr>
<td>Did you have to serve less food to any child because there wasn’t enough food?</td>
<td>77.8</td>
</tr>
<tr>
<td>Was there any day when any child in your home felt hungry but could not be fed because there wasn’t enough food?</td>
<td>56.2</td>
</tr>
<tr>
<td>Did any child in your home go to bed hungry on any day because of lack of food?</td>
<td>49.0</td>
</tr>
<tr>
<td>Was there any day when any child in your home didn’t eat for a whole day or just ate once during the day because there wasn’t enough food?</td>
<td>54.9</td>
</tr>
</tbody>
</table>
Husehold FI & Childhood Malaria: Haiti*


*Logistic regression adjusting for poverty indicators and anthropometry
ELCSA
data collection completed

- Haiti-2007  Pérez-Escamilla
- Guanajuato-2007  Parás/Pérez-Escamilla
- Colombia-2008  Alvarez-Uribe/Melgar-Quiñonez
- México-2008  Parás/Pérez-Escamilla
- México-2008  CONEVAL-MCS/ENIGH
- Mexico 2010  CONEVAL-MCS/ENIGH
- Nicaragua-2008  Caldera/Pachón
ELCSA data collection completed

- Uruguay
- Ecuador
- Bolivia
- Central America
  - El Salvador
  - Guatemala
  - Honduras
  - Nicaragua

Perez-Escamilla, Paras/LAPPOP
Melgar-Quiñonez/FAO
PRESANCA
ELCSA Applications
planning stage

- Brazil? Segall-Correa
- Paraguay FAO
- Albania FAO
Taller Regional: Armonización de la Escala Latinoamericana y Caribeña de Seguridad Alimentaria – ELCSA

FAO-ELCSA Harmonization workshop

INSP, Cuernavaca
7-10 Sept, 2010
COLLABORATING INSTITUTIONS

- UNICAMP
- UNIVERSITY OF CONNECTICUT
- THE OHIO STATE UNIVERSITY
- UNIVERSIDAD DE ANTIOQUIA
- Yale School of Public Health
Questions?