Panel discussion: Experiences in implementing learning/skills modules in household surveys - children

Use of the Early Childhood Development Index Mexico

February 2020
1. Use of the Early Childhood Development Index in the context of national household surveys
   • Generate population level evidence on both outcomes and determinants of ECD
   • Identify inequities affecting specific population sub-groups
   • Generate key indicators for monitoring purposes within the National System of Information on Childhood and Adolescents
     - National survey of children and women 2015 (ENIM-MICS 2015)
     - National Health and Nutrition Survey 2018 (ENSANUT 2018)

2. Field test of the new Early Childhood Development Index
   • Since 2017, collaboration between the INSP and UNICEF to carry out methodological activities for the validation of the new ECDI
   • In 2018, a field test was implemented with the aim of generating population-based data on the ECDI
MICS
Multiple Indicators Cluster Survey

ENSANUT
National Health and Nutrition Survey
### CHALLENGES AND CONSIDERATIONS ON ECD MEASUREMENT IN HOUSEHOLD SURVEYS

#### METHODOLOGICAL DESIGN

- ECD dimensions
- Validate instruments
- Adequation for HHs surveys
- Sampling design

... times and costs
ENSANUT-2018: Survey structure

**Health component**
- Household information
- Utilization of health services
- Child, adolescent and adults health outcomes and determinants
- Physical activity and knowledge of food labeling

**Nutrition component**
- Food assistance programs
- Food frequency consumption
- Anthropometry, blood pressure and blood samples (glucose, hemoglobin, blood lipids, VitA, zinc, lead)

**Interviews, direct measurement and biomarkers**
Criteria to include new instruments in the National Health Survey

- Solid conceptual frame, aligned with information needs in Mexico.
- Standardized methodology, previously validated and field-tested.
- Compatible with the ENSANUT implementation and logistic procedures
- Standardized implementation tools – training, manuals, quality control
- Low cost, low timing
Application times of ECD instruments

- Bayley-III: 95
- MELQO: 45
- PRIDI: 40
- Batelle: 30
- CREDI: 25
- EDI: 20
- TEPSI: 20
- Denver-II: 20
- CDE: 15
- Ages & Stages: 15
- PPVT: 10
- WHO- Motor: 10
- MacArthur: 10
- ECDI: 5
ENSANUT-2018: Survey structure

Health component

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Nutrition component

- Food assistance programs
- Food frequency consumption
- Anthropometry, blood pressure and blood samples (glucose, hemoglobin, blood lipids, VitA, zinc, lead)
- ECD module

Interviews

Interviews, direct measurement and biomarkers
Coverage and contents of ECD primary health care services
Attendance to early childhood education
Early stimulation and responsive care
Availability of children’s books
Availability of playthings
Inadequate supervision
Child discipline
**Early childhood development index**
Language development
CHALLENGES AND CONSIDERATIONS ON ECD MEASUREMENT IN HOUSEHOLD SURVEYS

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... times and costs

IMPLEMENTATION
- Household context
- PAPI and CAPI use (tablets)
- Training and standardization
- Monitoring data quality during fieldwork
- Supervision protocols
CONSIDERATIONS ON DATA QUALITY

Non-sampling errors - systematic errors - lead to biased results, compromising utility of information

• Errors due to any stage of the survey process, other than sampling errors, including:
  ▪ Inadequate project requirements/specifications, deadlines, objectives
  ▪ Insufficient budget, project management decisions, short-cuts
  ▪ Non adequate instruments, insufficient/poor validation
  ▪ Bad questionnaire design (skips, checks, filters)
  ▪ Insufficient training and standardization of survey in different contexts, ad-hoc decisions during field-work
  ▪ Fieldwork performance and poor interview technique
  ▪ Poor supervision (field and central office)
Operational challenges

• Difficulties to find the children's mothers

• Number of children <5 in the household, sometimes from multiple mothers

• Use of local interpreters mostly in rural areas

• Security issues

• Non-response in high socioeconomics areas
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UTILITY OF GENERATED DATA
ECDI FIELD TESTING
**OBJECTIVES OF THE ECDI FIELD TEST**

- Implement a household survey representative for the state of Puebla (rural, urban, metropolitan and indigenous populations).
  - Develop survey instruments including PAPI and CAPI questionnaires, interviewers and nurse’s instructions, data quality monitoring system and field check tables.
  - Carry out a cartographic survey of 17,000 households in 120 PSUs.
  - Pre-test survey instruments in 50 households in rural and urban communities and conduct additional cognitive testing.
  - Collect data on at least 1,200 households with children 2, 3 and 4 years old.

- Conduct psychometric analysis of the data to inform the reduction of the list of candidate ECDI items.
FIELD TEST ACTIVITIES-2018

- **CARTOGRAPHERS TRAINING** (July 18-20)
- **CARTOGRAPHIC LISTING** (July & August)
- **PRE-TEST TRAINING** (July 26-31)
- **PRE-TEST** (August 1-3)
- **FINAL TRAINING** (August 27- September 3)
- **LOGISTIC PRE-TEST** (September 4)
- **FINAL FIELDWORK** (September 6-30)

**FIELD TEST ACTIVITIES**

- Development of questionnaires, DA, CAPI programming, fieldwork materials
- Contact local authorities
- Sample design
- IRB approval
- Supervision
- Final sample selection

**DATA PROCESSING AND ANALYSIS**
INSTRUMENTS
1. Household questionnaire
2. Women’s questionnaire
3. Child’s questionnaire
4. Anthropometry and ECD direct assessment

MATERIALS
• Tablet with CAPI questionnaires
• Paper consent letters
• Anthropometry materials
• DA materials
• Fieldwork manuals
  • Interviewer manual
  • Nurse manual
  • Supervisor manual
• Log files
Questionnaire for children 2 to 4 years old

- Birth registration
- Early stimulation and responsive care
- Availability of children’s books
- Availability of playthings
- Inadequate supervision
- Child discipline
- Child functioning
- Early childhood development index
- ECD Direct assessment
- Anthropometry
FLOW OF ACTIVITIES WITHIN HH

1. APPROACHING THE HOUSEHOLD
2. CONSENT LETTERS
3. HOUSEHOLD QUESTIONNAIRE
4. WOMEN’S QUESTIONNAIRE
5. CHILD’S QUESTIONNAIRE
6. DIRECT ASSESSMENT
7. ANTHROPOMETRY

Duration per household: 42 min
PROMOTING DATA QUALITY

Previous to fieldwork
- Pre-testing of instruments and procedures (2 pre-tests)
- Training and standardization

During fieldwork
- Constant supervision
- Minimizing non-response
- Return visits to HH (at least 4) at different times and days
- 100% review of non-response
- Daily data transfer and survey status review
- Constant communication b/w central office and field
  - Spot-check supervision visit
  - Field check tables – data quality indicators
  - Feedback

After fieldwork
- Secondary edition
- Final data quality tables
## FINAL FIELD TEST SAMPLE

<table>
<thead>
<tr>
<th>SAMPLE DOMAIN</th>
<th>SAMPLING FRAME (Puebla)</th>
<th>SAMPLE FOR CARTOGRAPHY</th>
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<tbody>
<tr>
<td>PSU</td>
<td>2,860</td>
<td>120 (4.1%)</td>
</tr>
<tr>
<td>City blocks (urban)</td>
<td>64,481</td>
<td>291 (0.5%)</td>
</tr>
<tr>
<td>Rural localities</td>
<td>6,098</td>
<td>162 (2.6%)</td>
</tr>
</tbody>
</table>

### RESPONSE RATES

<table>
<thead>
<tr>
<th>QUESTIONNAIRE</th>
<th>ELEGIBLE SAMPLE</th>
<th>FINAL SAMPLE (response rate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Households</td>
<td>1,591</td>
<td>1,513 (93.4%)</td>
</tr>
<tr>
<td>Children 2, 3 and 4 years old</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Questionnaire</td>
<td>1,650</td>
<td>1,641 (99.4%)</td>
</tr>
<tr>
<td>Anthropometry</td>
<td>1,650</td>
<td>1,603 (97.1%)</td>
</tr>
<tr>
<td>ECD Direct Assessment</td>
<td>1,650</td>
<td>1,608 (97.4%)</td>
</tr>
</tbody>
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ECDI Field Test: Operational challenges faced

Operational challenges

- Difficult access in rural areas
- Rainy season
- Safety/violence
- High variability of survey and testing conditions
- Use of local interpreters
Learned lessons

• Ensuring data quality is paramount
  • The use of standardized tools used in global survey programs (MICS, DHS) enhances data comparability, quality and promote the utility of the generated information
  • ECD instruments should be tested in different contexts and fully harmonized to the procedures of a household survey. All procedures should be standardized to the minimize systematic errors
  • Importance of training (adequate techniques and duration)
  • Use of streamlined data quality control protocols and constant supervision

• Early Childhood Development can be measured at populations scale using household surveys, using standardized tools
  • The evidence generated on ECD, in the context of larger surveys, allows to generate important evidence on outcomes and determinants
  • Representative population level indicators that can be disaggregated allow identifying vulnerable populations

• From the point of view of household survey methodology, the NEW Early Childhood Development Index proved to be an adequate tool across different survey contexts
  • The measurement of early childhood development in children under 2 years old remains a challenge