Language translation & cultural adaptation of self-report instruments

Elva Arredondo, Ph.D.
San Diego State University
Institute for Behavioral and Community Health

Presented at
Measurement of Active and Sedentary Behaviors: Closing the Gaps in Self-Report Methods
National Institutes of Health, Bethesda, MD • July 21, 2010
• Importance of measurement
• Cultural competence
• Translation
  – Equivalence
• Qualitative methods
  – Focus groups
  – Cognitive interviews
• Final comments
Poor measures

• Threaten data reliability and validity
  – Mask true relationships
  – Poor psychometric properties
  – Do not capture the intended construct

• May lead to missing data
Cultural competence

- Cultural Competence
  - “..set of congruent behaviors, attitudes, and policies that come together in a system, agency, or among professionals and enables that system, agency, or those professionals to work effectively in cross-cultural situations”

Cross et al., 1989
Cultural Orientation Continuum

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>-3</td>
<td>Cultural Destructiveness</td>
</tr>
<tr>
<td>-2</td>
<td>Cultural Incapacity</td>
</tr>
<tr>
<td>-1</td>
<td>Cultural Blindness</td>
</tr>
<tr>
<td>0</td>
<td></td>
</tr>
<tr>
<td>+1</td>
<td>Cultural Openness (Sensitivity)</td>
</tr>
<tr>
<td>+2</td>
<td>Cultural Competence</td>
</tr>
<tr>
<td>+3</td>
<td>Cultural Proficiency</td>
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</tbody>
</table>

Kim, McLeod, & Shantzis, 1995
Culturally Competent Assessment

• Take into consideration:
  – The measure’s origin
  – Limitations of a measure involving the target community
  – The reliability/validity of measures
  – Diversity in conceptual meanings
Culturally Competent Assessment

• Problem:
  – Most measures have been developed in majority populations
  – Translation ≠ conceptual equivalence

• Goal:
  – Culturally sensitive assessment techniques, procedures & instruments
  – Valid & reliable assessment techniques, procedures & instruments
  – Linguistic and conceptual equivalence
Translate the measure

Qualitative
  Focus groups
  Cognitive interviews

Revise instrument
  Expert reviewers

Pilot test instrument
  (i.e., predictive, concurrent, etc.)
Common forms of translation

• One-way translation (not recommended)
  – Strengths: simple, economic
  – Weaknesses: over-reliance on one individual which allows misinterpretations in meaning. Leads to lower reliability, lower bivariate scores

• Back-translation
  – Compare versions & reconcile inconsistencies
  – Strengths: more thorough
  – Weaknesses: world views of translators may not represent that of the target population
Common forms of translation

• Translation by committee
  – Two different translations:
    • Translators come to a consensus
    • Committee rates different versions
  – Strengths: Straight forward
  – Weaknesses: world views of translators may not represent that of the target population
Does that mean we should not translate surveys from one language to another?
Suggestions for translating measures

• “Expert” reviewers from target group
• Appropriate literacy level (3rd grade level)
• Avoid metaphors and colloquialisms
• Short & simple (fewer than 16 words)
• Active vs. passive voice
• Use inclusive words

Marin & Marin, 1991
Qualitative methods: improve measures

• Allows us to assess the conceptual equivalence of measures across different communities

• Useful for constructing culturally appropriate measures

• Allows participants to respond in a way that accurately represents their point of view, ideas, thoughts, beliefs, etc.
Types of qualitative methods

Strengths and limitations

Focus groups vs. Cognitive interviews
Focus groups characteristics

- Typically consists of 6-10 participants
- Select people with characteristics of greatest interest
- Usually lasts between 60-90 minutes
- Usually tape recorded, transcribed, & coded
<table>
<thead>
<tr>
<th>Type of changes</th>
<th>Former question</th>
<th>Modified questions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Meaning</strong></td>
<td>“Futbol” (soccer)</td>
<td>“Futbol americano” (football)</td>
</tr>
<tr>
<td></td>
<td>“expendedora” (vending machine)</td>
<td>“maquinas que venden alimentos” (machines that sell food)</td>
</tr>
<tr>
<td></td>
<td>“Convive con su pareja” (cohabitate with your partner)</td>
<td>“Vive con su pareja” (live with your partner)</td>
</tr>
<tr>
<td></td>
<td>“intensidad vigorosa” (vigorous)</td>
<td>“mucho esfuerzo fisico” (a lot of effort physically)</td>
</tr>
<tr>
<td></td>
<td>“cirugia” (surgery)</td>
<td>“operacion” (operation)</td>
</tr>
<tr>
<td><strong>Inclusion of a variety of words</strong></td>
<td>“lugar de veneracion o culto” (place of worship or sacred place)</td>
<td>“lugar de veneracion, oracion, o culto” (place of worship, sacred place, or prayer place)</td>
</tr>
</tbody>
</table>
### Cultural relevance
What activities do you like to do?

<table>
<thead>
<tr>
<th>Remove</th>
<th>Add</th>
</tr>
</thead>
<tbody>
<tr>
<td>cazando (hunting)</td>
<td>limpieza (cleaning)</td>
</tr>
<tr>
<td>pescando (fishing)</td>
<td>construccion (construction)</td>
</tr>
<tr>
<td>escalando (rock-climbing)</td>
<td>fabricas (factories)</td>
</tr>
</tbody>
</table>

| Metric | “dos pies” (two feet) | “24 pulgadas” (24 inches) |

| Feminine words | “nervioso” (nervous) | “nervios(a)” (nervous) |

| Tu vs. Usted (Informal vs. formal) | “describe come te sientes” (tell us how you feel) | “describa come se siente” (tell us how you feel) |
A cognitive interview is different from a traditional standardized interview and from an everyday conversation. The researcher asks the questions in a standardized way but also asks the respondents to think aloud, highlight problems, express their opinion, make judgments on the questions...
Cognitive interview characteristics

- Designed to be intensive one-on-one & face-to-face
- Usually tape recorded, transcribed, & coded
- 45 minutes to 1 ½ hrs
- Select people with characteristics of greatest interest
Cognitive interview methodology

• Ideal to begin a cognitive interview with a short training or practice session
  – Respondent encouraged to think out loud

• Questions asked in standardized way
## Examples of probes

**How often do you exercise?**

*Everyday, every other day, at least two or three times a week, at least once a month, never*

| Think-aloud/general | How did you answer that question?  
|                     | Tell me what you are thinking?  
|                     | I noticed you hesitated before you answered, what were you thinking?  
|                     | How easy or difficult did you find this question?  
|                     | Why do you say that?  
|                     | How would you ask this question to a friend?  
|                     | Were there words that you would change? |

<table>
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<tr>
<th>Comprehension</th>
<th>What does the term _____mean to you?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retrieval</td>
<td>How did you remember that?</td>
</tr>
<tr>
<td>Confidence judgment</td>
<td>How well do you remember this?</td>
</tr>
<tr>
<td>Response</td>
<td>Were you able to find your first answer to the question from the response option shown?</td>
</tr>
</tbody>
</table>
Common mistakes

• Not asking the question exactly as it is written

• Not getting the participant to answer the question

• Not following-up on indication that the participant has responded incorrectly

• Forgetting to pursue how participants are interpreting key words
Process

Translate the measure

Qualitative
Focus groups
Cognitive interviews

Revise instrument
Expert reviewers

Pilot test instrument
(i.e., predictive Concurrent)
Final comments

• Cultural adaptation is an important part of designing effective questionnaires
• Important to do the work ahead of time to minimize measurement error
  – Translating a measure
  – Collecting qualitative data
• These are important considerations to help advance the field of physical activity
Thank you