Questionnaire Translation

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Outlines

1. Objectives
2. Equivalence
3. Stages
Translation
Translation

- Why we want to measure? Objectives.
- What we want to measure? Outcomes.
- Who we want to measure? Respondents.
- How we want to measure? Questionnaires & Questions.
Equivalence
Equivalence

• Equivalence between Original & Translated versions.

• 5 key aspects of equivalence (Streiner & Norman, 2008):

1. Conceptual
2. Item
3. Semantic
4. Operational
5. Measurement

Content
## Equivalence

<table>
<thead>
<tr>
<th>Aspects</th>
<th>Description</th>
<th>Western</th>
<th>Malaysian</th>
<th>Adaptation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conceptual</td>
<td>Do responders from two different populations and cultures understand the concept similarly?</td>
<td>Canning is child abuse.</td>
<td>Canning is way to teach children to behave properly.</td>
<td>Change to suitable items representing abuse in local culture.</td>
</tr>
<tr>
<td>Item</td>
<td>Whether the items are relevant and acceptable in target population.</td>
<td>Turning on heater.</td>
<td>Items not relevant in local setting.</td>
<td>Drop the items. Find/create suitable items conceptually.</td>
</tr>
<tr>
<td>Semantic</td>
<td>Concerns similarity in meaning attached to an item.</td>
<td>I get butterflies in my stomach.</td>
<td>? Saya ada rama-rama dalam perut ?</td>
<td>Saya rasa gelisah/cemas.</td>
</tr>
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## Equivalence

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<td>Operational</td>
<td>Equivalence of operational aspect of the measure, i.e. format of the measure, the instructions and mode of administration.</td>
<td>Direct question? Self-administered?</td>
<td>Indirect, politely phrased question? Interviewer guided?</td>
<td>Change the operational aspect of the questionnaire.</td>
</tr>
<tr>
<td>Measurement Equivalent</td>
<td>Concerns equivalence of psychometric properties of the measure, i.e. validity and reliability.</td>
<td>Factor analysis Reliability.</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
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**Operational Equivalence**
- **Western:** Direct question? Self-administered?
- **Malaysian:** Indirect, politely phrased question? Interviewer guided?
- **Adaptation:** Change the operational aspect of the questionnaire.

**Measurement Equivalent**
- **Western:** Factor analysis Reliability.
- **Malaysian:** -
- **Adaptation:** -
Stages
Stages

• 7 stages (adapted from Beaton et al., 2000; McDonald, et al., 2003; Wild et al., 2005):
  1. Forward Translation
  2. Reconciliation
  3. Backward Translation
  4. Harmonization
  5. Pre-survey evaluation
  6. Finalization
  7. Full validation survey
Stage 1

1. Forward translation

Original (e.g. English) → Target Language (Malay)
TWO translators
→ 1 medical & 1 non-medical/naive
→ Both native speakers of target language
Perform independent translations
Stage 2

2. Reconciliation

Review the two translations
Translation panel:
→ The study team
→ The two forward translators
→ Linguist
Reconcile → Combine into one translated version.
3. Backward Translation

Target (e.g. Malay) $\rightarrow$ Original (English)
TWO translators
$\rightarrow$ 1 medical & 1 non-medical/naive
$\rightarrow$ Both competent speakers of original language
Perform independent translations
4. Harmonization

Compare back-translated versions with the original → discrepancies → point to difficult words/concepts
Translation panel
Revisions to forward translations
Consider equivalence aspects
Produce a preliminary translated version
5. Pre-survey Evaluation

Same steps to the pre-survey evaluation of a newly developed questionnaire. Comments from experts & a sample of target respondents → uncover some small mistakes in the previous stages → from views of those not in panel & respondents Cognitive debriefing & pre-test → Response process evidence of validity
Stage 6

5. Finalization

Translation panel review comments from pre-survey
Make relevant revisions
Fine tune the questionnaire
Produce final questionnaire → may need further validation
Stage 7

7. Full Validation Survey

Involves a large sample – few hundreds
Mainly evidence of internal structure and relationship to other variables
References


