Cross-cultural Research

Translation and Linguistic Validation of Research Instruments into Other Languages

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If you talk to a man in a language he understands, that goes to his head. If you talk to him in his language, that goes to his heart. Nelson Mandela
A word to the wise

Tuesday, February 15, 2011
A word to the wise

• Watch out with translations
A word to the wise

• Watch out with translations

• You could get into trouble!!
Notices seen in bars
Notices seen in bars

• Norwegian cocktail bar

• Ladies are requested not to have children in the bar
Notices seen in bars

- Tokyo bar
  - Special cocktails are available for ladies with nuts
Rhodes tailor shop
Rhodes tailor shop

• Order your summer suits. Because is big rush we will execute customers in strict rotation
Instrument development for cross-cultural studies

- Not all instruments are translated
- Some are developed *de novo* in more than one language simultaneously
- The method is less biased than translating, but it is complex, more expensive and infrequently used
- In most cases, an existing instrument developed and validated in English is translated into another language
Cultural adaptation
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- A process which looks at both language and cultural issues in the process of preparing a questionnaire for use in another culture.
The challenge
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• To adapt an instrument so that it:


The challenge

- To adapt an instrument so that it:

  - Retains the meaning and intent of the original instrument, and
The challenge

• To adapt an instrument so that it:
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  • Is culturally relevant and comprehensible
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• In other words, “cultural” rather than “literal” translation
Potential methodological pitfalls

Translators

- Translators themselves may be the source of problems
- They may not be familiar with the specific problems of cross-cultural translating
- Colloquialisms, slang/jargon, idioms
- Emotionally-evocative terms that are particularly difficult to translate
### Culture-specific vs universal concepts

<table>
<thead>
<tr>
<th>Universal</th>
<th>Culture-specific</th>
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<tbody>
<tr>
<td>Male-Female</td>
<td>Masculinity-Femininity</td>
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Culture-specific vs universal concepts

- Universal concepts are easier to translate

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Potential methodological pitfalls

Translators

- Translators may lack knowledge of the study content area
- Specialized medical subjects require specialists in medical translating
Examples

• Question:

• Are you concerned about getting health insurance because of your Ulcerative Colitis?

• The question could be translated perfectly into another language, but not understood by patients in countries with universal health insurance

Examples

• IBS epidemiological study among Israeli Bedouins
Examples

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• Rome II questionnaire was translated into Arabic by a Jerusalem-based Arab translating company
Examples

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- Rome II questionnaire was translated into Arabic by a Jerusalem-based Arab translating company
- We asked two Bedouin doctors to look at the questionnaire.
Examples

- IBS epidemiological study among Israeli Bedouins
- Rome II questionnaire was translated into Arabic by a Jerusalem-based Arab translating company
- We asked two Bedouin doctors to look at the questionnaire.
- They said that the term used for “bowel movement” was correct for Israeli non-Bedouin Arabs, but would not be understood by 90% of Bedouins
The process - back translation

Phase 1

Source language scale (A)

Translation

Target language scale (B)

Back-translation

Back-translated source language scale (C)
Examples

- Sometimes translators are “too good”
- Question: “Are you often fed-up?”
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- Forward translation: “Do you often feel that your stomach is full”
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Examples

• Sometimes translators are “too good”

• Question: “Are you often fed-up?”

• Forward translation: “Do you often feel that your stomach is full”

• Backward translation: “Do you often feel fed-up?”

• What’s going on here?

• The translator intuitively made sense of a poor translation and corrected it without notifying the investigators of the problem
Translation validation

Phase 2

- Source language scale (A)
- Back-translated source language scale (C)

Comparison

Identification of problem items

Phase 2 repeated as required

Assessment/revision of problem items
The next step
Validation of the translation

- An often skipped step
- Possible approaches to validation of the translation
  - Expert consultants
  - Testing on bilingual populations
  - Focus groups of potential subjects
Method for translation validation

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- Developed by Drs. Boehlecke and DeVellis (UNC) and myself
- To identify and correct problem items by comparing the source and back-translated instruments in two dimensions:
  - formal language
  - meaning

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- To identify and correct problem items by comparing the source and back-translated instruments in two dimensions:
  - formal language
  - meaning
- Linguistic equivalence may have to be sacrificed intentionally to ensure equivalence of meaning since the latter is the more important objective

<table>
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<tr>
<th>Step</th>
<th>Product</th>
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<tr>
<td>1. Two independent forward translations</td>
<td>Forward versions 1a and 1b (target language)</td>
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<tr>
<td>2. Reconciliation of two forward versions</td>
<td>Forward version 2 (target language)</td>
</tr>
<tr>
<td>3. Backward translation</td>
<td>Backward version (source language)</td>
</tr>
<tr>
<td>4. Harmonization - comparison of two source language versions with</td>
<td>Final product in target language</td>
</tr>
<tr>
<td>cultural adaptation adjustments</td>
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- Translation is the most common method for preparing study instruments.
- It has pitfalls that threaten validity.
  - Some are very difficult to detect.
  - If undetected they could have an unrecognized, deleterious effect on study results.
- Rigorous methodology is required for the translation and validation of instruments for cross-cultural research.