Importance of collaboration with developers in the clarification of concepts: a case study with the University of California, San Diego (UCSD) Shortness of Breath Questionnaire (SOBQ)

Andrew L. Ries [1], MD, MPH, Dagmar Kaschinski [2], Cédric Montigny [3]

[1] University of California, San Diego, California, USA; [2] Boehringer Ingelheim GmbH, Ingelheim am Rhein, Germany; [3] MAPI Institute, Lyon, France

Objective

- The UCSD SOBQ, a 24-item instrument developed in US English, assesses self-reported shortness of breath while performing a variety of daily living activities.
- The objective of this report is to underline the importance of collaboration with the developers to clarify concepts and ensure their correct interpretation while translating the original version into other languages.

Methods

Interactive discussion with the developers of the SOBQ was undertaken to formalize a concept list that would:

- Explain and clarify the conceptual notions underlying each item in simple language so they would be accurately reflected in each language version produced; and
- Provide acceptable approved translation alternatives.

Results

- The concept list was developed and revised four times during the translation process and widely expanded with definitions and alternate translations validated by the developers (see Table 1).
- Through questions raised during the linguistic validation process, collaboration with the developers highlighted items initially considered as unambiguous but which required additional information to be faithfully rendered in all languages.
- Among the 24 items of the SOBQ, four items proved to be unclear: 'dressing', 'picking up and straightening', 'making bed' and 'doing laundry.' Table 2 presents the items, their meaning and possible translation alternatives.
- Three other items were identified as culturally inappropriate for certain languages and, therefore, needed to be adapted to be suitable to the countries for which these activities were not relevant: 'washing car', 'watering the lawn', 'mowing the lawn.' See Table 3 for a presentation of translation alternatives.
  - For instance, 'mowing lawn', was translated by 'gardening' in France and India (Marathi).
  - 'Watering lawn' was translated by 'watering flowers and trees' in Japan.
  - Washing car was translated by 'washing car or any other vehicle' in India (Tamil).

Table 1. Status of List of Concepts

Version	Created and checked by*	Approved by	Date implemented	Main Changes / Comments
1.0	VU/CMY		26/11/2010	
2.0	VU/CMY	Authors	18/01/2011	Validation of the list following developers' feedback and dissemination
3.0	VU/CMY	Authors	21/01/2011	Update of the list following latest developers' feedback
4.0	VU/CMY	Authors	10/02/2011	Update of the list following latest developers' feedback
5.0	VU/CMY	Authors	22/03/2011	Update of the list following developers' feedback about response choices for items 22-24

*MAPI staff

Table 2. Items needing clarification

Wording of original	Concept	Translation tips	Possible alternatives
Dressing	The respondent is asked to estimate his/her dyspnea when putting on clothes and undressing.	It should include taking off clothes as well so please ensure that this notion is reflected in all translations.	Putting on and taking off clothes.
Picking up and straightening	This has to do with general concept of "straightening up" a room, not necessarily bending down to pick something up from the floor.		Picking things up and tidying them up.
Making bed	The respondent is asked to estimate his/her dyspnea when making his/her bed, i.e. to smooth and arrange the covers on a bed so it is ready for someone to sleep in (put back the sheets/covers in order once the person has finished sleeping), either according to his/her own experience or imagining what it would be like.	Please ensure that the translation in each target language refers to putting back sheets and covers in order once the person has finished sleeping.	Make the bed/lay out or fold up a futon (for Japan).
Doing laundry	The respondent is asked to estimate his/her dyspnea when washing, drying and folding his/her clothes, either according to his/her own experience or imagining what it would be like. Laundry refers to washing, drying, folding, etc... linen/clothes. This also includes doing the activity manually.	Careful attention should be paid to ensure that this item is understood as washing, drying and folding clothes/linen. For the countries where this activity is still done by hand, it is possible to add "manually".	Washing one's clothes, washing my clothes, washing your clothes, washing, drying and folding clothes manually.

Table 3. Items culturally difficult

Wording of original	Concept	Translation tips	Possible alternatives
Washing car	The respondent is asked to estimate his/her dyspnea when cleaning his/her car, either according to his/her own experience or imagining what it would be like.	In some countries (India for example), people do not have a car and they may be washing bicycles, scooters, motorcycles, or even tractors etc so it is possible to render this item with "washing car or any other vehicle" or "washing a vehicle".	Cleaning one's car, cleaning your car, cleaning my car, (see general comments regarding the form of address) washing car or any other vehicle, washing a vehicle.
Watering lawn	The respondent is asked to estimate his/her dyspnea when irrigating the grass, either according to his/her own experience or imagining what it would be like.		Watering the grass, watering flowers, watering plants.
Mowing lawn	The respondent is asked to estimate his/her dyspnea when mowing the lawn, either according to his/her own experience or imagining what it would be like. This refers to doing the activity manually, although mowing the lawn could refer to pushing a power mower while walking (not seated or a self-propelled variety).	For the countries where this activity is still done by hand, it is possible to add "manually".	Cutting the grass, cutting grass (pushing a lawn mower while walking), cleaning the home garden, gardening, mowing the lawn manually.

Conclusion

It is essential to involve the developers in the clarification of the concepts underlying each item in a questionnaire to allow their correct interpretation in other languages and cultures. This step is crucial to ensure comparable content validity between different language versions. This example with the SOBQ shows that the involvement of developers is a dynamic and necessary process.

Contact

For more information, please contact: **Cédric Montigny**, MAPI Institute.
cmontigny@mapigroup.com

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ISPOR, 5-8 November 2011, Hotel Auditórium Madrid, Madrid, Spain