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The Translation and Linguistic Validation of the EQ-5D Visual Analogue Scale (EQ VAS)

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Objectives:

The EQ-5D 3 level version (EQ-5D-3L) has been translated into many languages. The EuroQol Group have recently altered and clarified the instructions for the EQ VAS scale for their new 5 level version of EQ-5D (EQ-5D-5L). The objective of this study was to produce translations that are conceptually equivalent to the original and to other language versions, ensuring the relevance of the translations within the target cultures.

Methods:

A standard methodology was employed: 1 forward and 1 back translation, back translation review and developer review; or an in-country review and developer review; linguistic validation interviews with 8 subjects, a mix of healthy people and patients, a second developer review and 2 proofreadings.

Results:

The translation process highlighted numerous cultural and linguistic issues - see table overleaf:

Table 1: Translation issues and their resolution

Country	Language	Wording in English	Issue	Solution
Czech Republic	Czech	The word for <i>health</i> in: We would like to know how good or bad your health is TODAY.	"Health" alone in Czech has either general meaning (e.g. "health policy") or it means "good health".	"Health status" was chosen in back translation review and developer review. No problems with this arose in cognitive debriefing.
South Korea	Korean	YOUR HEALTH TODAY 100 means the <u>best</u> health you can imagine.	The in-country investigator explained that the Korean term for "health" refers to 'physical (and/or mental) state over a long period of time.' Koreans never say "health today" or "health yesterday."	"Health state" was used in back translation review and developer review and accepted without any issues in cognitive debriefing.
Russia	Russian	0 means the <u>worst</u> health you can imagine. The best health you can imagine The worst health you can imagine	In Russian, the word "health" is associated with time references that are considerably longer and less specific than "today". Russian patients understood "health state" as the evaluation given by a doctor or test results rather than their own assessment of their health.	"Health status" was used and tested in cognitive debriefing. After debriefing, it was decided to add "in your opinion," as used in the existing 3L version.
			Some patients during cognitive debriefing answered the questions in general, as opposed to with reference to "today." The in-country investigator in Russian explained this was due to "health state" being more general than today.	No change was made to this since "health state" had already been discussed in the first developer review as the term most suitable for specifying "today." The alternative "self feeling" which is often used in informal medical discussions on a daily basis digressed too far from the existing 3L version. Since some patients showed understanding that they were to consider their "health today", the wording was kept as it is. This also kept it consistent with the wording in the existing EQ-5D-3L version.
			"Health" was reworded by subjects as "health state" in cognitive debriefing.	The in-country investigator explained that "health state" implied a specific period of time, like "today". Nevertheless, since "health" alone could be used to cover both health in a determined period of time and a more general time span, "health" was used.
Brazil	Portuguese			
Netherlands	Dutch	The word for <i>scale</i> in: This scale is numbered from 0 to 100.	The Dutch word "schaal" for scale was closely associated with the term for dish during the cognitive debriefing process.	In the second developer review it was decided that an explanation should be inserted, likening the scale to a thermometer as in the previous 3L-VAS.
Germany	German	The phrase <i>mark an X on the scale</i> in: Mark an X on the scale that shows how good or bad your health is TODAY.	"Mark an X" is difficult to render literally in German.	In the back translation review "please mark the point on the scale" was used, using the verb "ankreuzen" which includes the concept of making a cross. This presented no difficulties in cognitive debriefing.
France	French		"Mark an X" is difficult to render literally in French.	"Insert a cross (X)" was chosen during the back translation review. No problems were encountered in cognitive debriefing.
Canada	French		"Mark an X" is difficult to render literally in Canadian French.	During the in-country review "make a cross (X)" was chosen as a phrase more common in Canadian French. No problems were encountered in cognitive debriefing.
Russia	Russian		In cognitive debriefing, one patient became confused about the cross and the horizontal lines crossing the vertical axis.	Although the Russian already stated "cross", to aid understanding, the cross sign "X" was added during the cognitive debriefing review stage.
			In cognitive debriefing, one patient struggled to understand to mark "on" the VAS and placed their crosses opposite the VAS scale.	It was verified that this was not a problem in the translation, since the Russian word could only mean "on" not "opposite." Furthermore, seven out of eight participants had made their mark "on" the scale during cognitive debriefing.

Conclusions:

- Some languages had to select specific vocabulary to suit the recall period in the EQ VAS.
- The existing versions of the EQ-5D-3L already contained solutions to many of the translation issues faced and reference to these ensured a consistent translation approach.
- The back translation review stage, the developer review stages and the cognitive debriefing stage played a key role in highlighting these issues and ensuring the clarity and accuracy of the translations.

The EQ VAS has been translated and linguistically validated using a rigorous translation process. A number of cultural and linguistic issues became apparent and were resolved. The measure is now appropriate for use in multinational trials.

With thanks to EuroQol Group

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