

Abstract for ISOQOL 2024

A linguistic comparison of twelve Arabic versions of the Diabetes Treatment Satisfaction Questionnaire (DTSQs version): exploring the feasibility of regional rather than country-specific questionnaires

Authors: Rana Almbark, Michelle Taylor, Alison Wilson, Clare Bradley

Aims

Standard Arabic is the official language in 28 countries, which are geographically classified into five regional groups: Levant, Gulf, Egypt, North Africa, and Iraq. To promote conceptual/cultural equivalence of Patient Reported Outcome Measures (PROMs), a rigorous linguistic validation process is followed when adapting an existing questionnaire for use in another country (<https://healthpsychologyresearch.com/linguistic-validation/>). We aimed to explore the feasibility of developing regional Arabic PROMs rather than country-specific. Thus, we evaluated the extent and type of linguistic modifications recorded across 12 linguistically validated Arabic Diabetes Treatment Satisfaction Questionnaire-status versions (DTSQs), four of which were Levantine, compared with the four Levantine country questionnaires (Syria, Lebanon, Jordan, and Israel).

Methods

The DTSQs text was compared word by word (166 per questionnaire) across the 12 country versions (including Levantine) and the subset of four Levantine versions, recording modifications (modified/not modified). Modifications were linguistically classified as: lexical, morpho-syntactic, diacritic, spelling, and punctuation. Lexical modifications were further classified as modifications in content vs. function words, and morpho-syntactic modifications as modifications in phrasal structure, definiteness, tense, and gender.

Results

A Chi-Square test showed that the DTSQs text had significantly more modifications (89%) in the 12 country-specific versions compared to the subset of four Levantine versions (73%) ($X^2[1,2655]=87.47$, $P<.001$), with most modifications in the Levantine versions being for Israel (40%). The 12 country-specific versions and the subset of four Levantine versions had similar linguistic modifications, with morpho-syntactic and lexical changes occurring the most, respectively. The extent of all linguistic modifications was significantly greater across the 12 country-specific versions compared to the subset of four Levantine versions: lexical ($X^2[1,2655]=15.39$, $P<.001$), morpho-syntactic ($X^2[1,2655]=86.70$, $P<.001$), diacritic ($X^2[1,2655]=17.27$, $P<.001$), spelling ($X^2[1,2655]=17.84$, $P<.001$), and punctuation ($X^2[1,2655]=6.39$, $P=.012$). Lexical modifications in content words and morpho-syntactic

modifications in phrasal structure were the main types of linguistic modifications in both groups.

Conclusion

Although Standard Arabic was used for all 12 Arabic DTSQs versions, most of the text was modified, which suggests that using a single macro-Arabic PROM is unlikely to be acceptable to all. However, the greater similarity across the four Levantine versions increases the feasibility of one regional Arabic questionnaire which is acceptable in the four Levantine countries.

350 words