HEALTH-RELATED QUALITY OF LIFE MEASURE (EQ-5D-5L): MEASUREMENT PROPERTY TESTING AND ITS PREFERENCE-BASED SCORE IN THAI POPULATION

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ABSTRACT

This research aimed to develop the population-based preference scores of the EQ-5D-5L (the 5L), Thai version in an effort to compare the measurement properties of the 5L with those of the EQ-5D-3L (the 3L), and to compare the results of an economic evaluation from a 2014 study that used the 5L compared with the 3L.

To elicit population-based preference score, face-to-face interviews using the EQ-VT protocol was undertaken in 12 provinces across Thailand. A representative sample consisting of 1,207 recruited individuals was used in a stratified stage sampling and quota sampling of age and gender. Regarding TTO valuation, 86 health states were grouped into 10 blocks. Each block contained 10 health conditions. For the Discrete Choice Experiment (DCE) valuation, 196 health states grouped into 28 blocks of 7 pairs of health states were used. For each participant, the block used for TTO valuation and DCE valuation were randomly selected through the use of the EQ-VT software application. Regarding the comparison of the measurement properties, a total of 117 diabetes patients treated with insulin completed a questionnaire including the 3L, the 5L, and SF-36. Measurement properties were then assessed in terms of distribution, ceiling effect, convergent validity, discriminative power, test-retest reliability, and patient preference. The result of economic evaluation using the utility derived from the 5L was compared with those from the 3L in term of incremental cost-effectiveness ratio (ICER) and cost-effectiveness acceptability curve (CEAC).

The result of the interview showed no inconsistency among 3,125 possible health states for the 5L. Random effect model with only primary effects was selected. Mobility had the greatest impact on preference score. The second best score was 0.968 for state 11112 and the worst score was -0.283 for worst state (55555). In terms of measurement properties, evidence supported the convergent validity of both 3L and 5L. However, the 5L showed a trend towards a slightly lower ceiling effect compared with the 3L (33% vs 29%). It also showed more promise when compared to the 3L in terms of more discriminatory power, more reliable index score, and more preferable by respondents. In addition, it was found that the preference scores derived from the 5L yielded lower ICER and produced less uncertainty than those derived from the 3L. Thus, the 5L could be recommended as a preferred health-related quality of life measure in Thailand.

KEY WORDS: HEALTH-RELATED QUALITY OF LIFE / EQ-5D / MEASUREMENT PROPERTY TESTING / PREFERENCE-BASED SCORE / TARIFF / VALUE SETS

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