

Mapping SF-36 dimension scores onto EQ-5D-5L utility scores in a

French population

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Abstract

Context: In France, since 2020, only the questionnaire EQ-5D-5L is recommended by the Haute Autorité de Santé (HAS) when cost-utility analyses are carried out in the regulatory framework.

Objective: Our study aimed at estimating a mapping function from the 36-Item Short Form General Health Survey questionnaire (SF-36) to the EQ-5D-5L questionnaire.

Methods: SF-36 dimension scores were mapped onto the EQ-5D-5L index using different model specifications from a French patient dataset - the multicenter longitudinal sleep cohort database of the IRSRpl. Ordinary Least Squares (OLS) and Tobit regressions were carried out. Models were then compared from several measures of goodness of fit: the adjusted R squared, the mean absolute error (MAE), the root mean squared errors (RMSE).

Results: The 1,054 individuals of our sample were on average 66 years old (std 10.47), with an average utility score of 0.82 (std 0.22). The majority were men (69%). Our adjusted R² were from 0.54 to 0.64, MAE from 0.81 to 0.103 and RMSE from 0.13 to 0.15. The demographic variables were not statistically significant. The accuracy of our predictions dramatically decreased for severe health states.

Conclusion: Our mapping function enabled to convert SF-36 dimension scores onto EQ-5D-5L index. Our prediction models provided coefficients and performance close to previous published mapping functions. They were the first estimations using EQ-5D-5L rather 3L and in a French population.