

# Determinants of health preferences across 58 EQ-5D-5L value sets from 49 countries

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## ABSTRACT

### Purpose

In health technology assessments, country specific health-related quality of life value sets are commonly used to reflect the health preferences of the population. Still the factors driving variation in health preferences across countries are not well understood. We aim to analyze determinants of these preferences in relation to the EQ-5D-5L value sets.

### Methods

This study included 58 EQ-5D-5L value sets from 49 countries created in the period 2016 to 2024. Of these 45 were made using the valuation technology (VT) protocol and 13 by crosswalk mapping. As a measure of country-level income we used Gross Domestic Product per capita (GDPPC) in 2024. The preferences were analyzed using the mean utility individually across the five dimensions; anxiety/depression (AD), mobility (MO), pain/discomfort (PD), self-care (SC), and usual activities (UA). We present estimates from linear regression adjusted for method (VT vs. crosswalk) and using robust standard errors.

### Results

We found that an \$10.000 USD increase in GDPPC was associated with increases in mean disutility for AD of [0.008 (95% CI: 0.002 to 0.013),  $P = 0.006$ ] and a decrease for MO [-0.007 (95% CI: -0.012 to -0.002),  $P = 0.009$ ], SC [-0.004 (95% CI: -0.007 to -0.001),  $P = 0.019$ ], and UA [-0.003 (95% CI: -0.006 to -0.001),  $P = 0.018$ ]. For PD we found no significant associations in relation to income. The directions of these associations remained consistent when analyzed separately for the two methods (VT and crosswalk). The variation explained by the models (Adjusted  $R^2$ ) ranged from 6.5% for PD to 26.4% for AD.

### Conclusion

We found that income is one of the key determinants of the variation in health preferences across countries. The analysis showed that high-income countries place a higher disutility on mental health, and relatively lower disutility on mobility, self-care and usual activities compared to low-income countries. However, a large degree of variation is still unexplained. In the future we plan to integrate other likely determinants such as religion and cultural values that could explain differences.