Compare self-reported EQ-5D-5L health state utilities using three country-specific EQ-5D-5L value sets on insomnia patients and general population in Taiwan.

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Background: Each country needs their country-specific value set to represent the health preference for their general population. To get the utility values, there're some preference-based instrument to use, and Eurolqol-5Dimensions system(EQ-5D) is one of the preference-based instrument. Several national value sets for the EQ-5D-5L following the valuation protocol with accompanying computer based software have been published, and more are under reviewed, including Taiwan.

Objective: We aimed to compare the self-reported EQ-5D-5L responses and their corresponding health utility using 3 other country's value sets, which were derived from Indonesia, England, Japan, respectively, between insomnia patients (IP) and general population (GP) in Taiwan.

Method: For general population, 295 samples with matched, age, gender, living area, as well as education, were randomly selected from the full samples of "Taiwan EQ-5D-5L valuation study to examine their self-reported EQ-5D-5L data. The self-reported EQ-5D-5L data of 218 participants who participated "The cognitive behavior of sleep in insomnia patients study" were extracted to compare as well. We performed independent *t* test analysis to compare the utility difference between GP and IP, and compare the utility difference of 5 dimensions between each population with problems and without problems. We conducted two-way ANOVA to analyze the discriminatory power of 3 country-specific value sets and visual analog scales between groups and problems of each dimension.

Results: The mean utility values of GP derived from Indonesia, England, Japan value set were 0.94, 0.96, 0.90, respectively, and were 0.90, 0.92, 0.87 for IP, respectively ($p<0.001$). It seems not easy to discriminate the generated utility values between GP group and IP group in self-care of 3 value sets($p=0.911$, 0.499, 0.702, respectively), and in pain/discomfort of Indonesia's tariffs ($p=0.055$) but the others are easy (all *p*s<0.05).

Conclusions: Whenever Taiwan' tariff is under analysis and review, the generated health utilities using England's, Japan's or Indonesia's tariffs were still various from general population and patient groups. Using value sets generated from general population seems sufficient to estimate patients' utility values but further studies are needed.