

P118 Psychometric validation of PROMIS Global Health using EQ-5D-3L in a representative Korean adult sample

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Objective: The Patient-Reported Outcome Measure Information System® (PROMIS) Global Health is a brief instrument for assessing overall health across two domains – Physical Health and Mental Health. This study aimed to evaluate the psychometric properties and construct validity of the Korean version of PROMIS Global Health in a large sample of representative population using EQ-5D-3L as a legacy comparison.

Methods: A survey was conducted from December 2021 to January 2022 among a representative sample of Korean participants. Participants completed the PROMIS Global Health and EQ-5D-3L. The distribution characteristics of both tools were analyzed. Convergent validity was assessed using Spearman's correlation coefficients between each dimension of the EQ-5D-3L and both the PROMIS physical health and mental health T-Scores. Known-group validity was tested by comparing mean PROMIS scores across EQ-5D-3L response levels (no problems, some/moderate problems, severe problems) for each dimension using one-way ANOVA.

Results: PROMIS Physical health (46.52 ± 8.57) and mental health (45.58 ± 8.34) T-scores were close to normal distribution, while the EQ-5D-3L index (0.89 ± 0.10) showed a significantly left-skewed distribution. All EQ-5D-3L dimensions showed moderate to strong correlations with PROMIS physical health ($\rho = -0.33$ to -0.52) and mental health ($\rho = -0.22$ to -0.60 ; all $p < 0.01$). For each EQ-5D-3L domains, PROMIS physical and mental health scores declined progressively across worsening response levels (Mobility: 47.96, 37.01, 34.65; Anxiety/depression: 48.86, 41.10, 35.76; $p < 0.01$), supporting known-groups validity.

Conclusions: The Korean version of PROMIS Global Health demonstrated good distributional characteristics, strong convergent validity with the EQ-5D-3L, and sensitivity to chronic disease status, thereby validating its use as a reliable and valid tool for measuring global health in Korean population.