

P77 Psychometric evaluation of Arabic sleep assessment tools

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Objective: This study evaluated the psychometric properties of four patient-reported outcome measures (PROMs) for sleep assessment available in the Arabic language: the Insomnia Severity Index (ISI), Epworth Sleepiness Scale (ESS), Pittsburgh Sleep Quality Index (PSQI), and PROMIS® Sleep-Related Impairment (SRI) item bank.

Methods: Healthy Arabic-speaking adults (n = 314; mean age, SD: 29.1, 12.0 years; 82.2% female) from healthcare and community settings in Saudi Arabia were recruited. Participants completed all sleep PROMs with sociodemographic data. Rasch analysis assessed rating scale functioning, dimensionality, model fit, differential item functioning (DIF), item-persons targeting and reliability.

Results: The ISI showed one misfitting item, low person reliability (0.68) and poor targeting, limiting its use for mild sleep impairment. The ESS demonstrated ordered categories and acceptable fit but inadequate reliability (0.73) and poor targeting. After excluding three malfunctioning items, the PROMIS SRI item bank demonstrated robust psychometric properties, including well-ordered categories and thresholds, high reliability (0.90), good targeting, negligible multidimensionality and no substantial DIF. The PSQI showed unidimensionality and acceptable item fit, but its low reliability (0.52) and poor targeting limited its applicability.

Conclusions: Among the four tested PROMs, a 13-item questionnaire from the PROMIS SRI item bank emerged as the most psychometrically sound tool for assessing sleep-related impairments in Arabic-speaking populations. While ISI, ESS, and PSQI are common, their psychometric limitations raise serious concerns regarding their clinical utility.