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Presentation mode: Oral

Title: Descriptive and explanatory IRT modeling of a new Quality of Life questionnaire specific for HIV patients

Topic of area: GLN

Abstract:

PROQOL-HIV is a new Health-related Quality of life (QoL) questionnaire specific for HIV patients. Multicentric pretesting of items was carried out in 8 countries while collecting sociodemographic and biomedical data on patients. Psychometric validation proceeded from analysis of inter-items correlations through Exploratory Factor Analysis which isolates eight main dimensions explaining more than 60% of responses variance to a set of 39 Lickert-type items. Convergent validity was assessed using multi-trait scaling analysis and correlation of QoL scores with MOS-HIV questionnaire already in use. Subgroup analyses indicated that scaled QoL scores were also sensible to biomedical markers, with number of symptoms, depression and CD4 concentration having larger effect size.

Rasch-based models can be expressed as generalized linear mixed models which allows to adjust items parameters estimates to country-dependent variations in average QoL level, while providing a way to test for differential item functioning (DIF). Influence of person-level covariates was evaluated on the physical health and symptoms subscale. Responses were also analyzed as polytomous (partial credit *vs.* rating scale model), providing additional insights on country-specific respondents' behavior.

This analysis helped to validate the preliminary cultural validation study and yielded more reliable estimates of QoL levels both at the individual and country level.

(Words count: 200)

Keywords: HR-QoL, mixed-models, explanatory item response models