

Measuring and staging severity of disability in a nationally representative sample: Implications for occupational therapy practice and policy formulations.

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Introduction: Measuring disability among community dwelling adults is important for determining the needs of individuals, comparing groups and improving health programs. Transforming scores into measures using Rasch methodology mean that person and items can be calibrated into a continuum that provides information on the levels of ability/disability using a same linear continuum for person and items. In addition, staging can separate groups of people based on the severity of disability that can provide better interventions to practitioners and designing improved health programs for practitioners.

Objectives: The objectives were to create a disability severity scale using the Rasch model based on self-reported activities of daily living questionnaires and to generate staging levels.

Method: A cross-sectional design using a population representative sample of the community dwelling adults (n=20,384) in the 2013 United States Panel Study of Income Dynamics. The construct validity and reliability of the disability scale was examined using the Rasch methodologies (dimensionality, fit statistics, precision).

Results: Three misfitting items (heavy housework, manage money, eating) were removed from the Rasch modelling, and the remaining 23 items demonstrated a moderate-high reliability (Cronbach alpha=0.72). The disability scale demonstrates a unidimensional construct. The disability scale separated the sample into three distinct strata (Person separation index=1.59) where their center points were 3.45, 4.59, and 5.73 logits, respectively.

Conclusion: The constructed disability scale has good psychometric properties based on Rasch principles. Staging can provide information to classify patients who live in the community. Possible implications for occupational therapy practitioner, researchers and policy formulations are explored.