Abstract

Background: Older adults and individuals with neurological problems such as Parkinson’s disease (PD) exhibit balance deficits that might impair their mobility and independence. The assessment of balance must be useful in identifying the presence of instability and orient interventions. Objective: To translate and perform a cross-cultural adaptation of the Balance Evaluation Systems Test (BESTest) and MiniBESTest to Brazilian Portuguese and analyze its psychometric properties. Method: The tests were translated and adapted to Portuguese according to a standard method and then subjected to a test-retest reliability assessment (10 older adults; 10 individuals with PD). The psychometric properties were assessed by the Rasch model (35 older adults; 35 individuals with PD). Results: The reliability coefficient of the tests relative to the items and subjects varied from 0.91 and 0.98, which is indicative of the stability and reproducibility of the measures. In the BESTest, the person (4.19) and item (5.36) separation index established six balance ability levels and seven levels of difficulty, respectively. In the MiniBESTest, the person (3.16) and item (6.41) separation index established four balance ability levels and nine levels of difficulty, respectively. Two items in the BESTest did not fit with the model expectations, but the construct validity was not compromised. No item in the MiniBESTest was erratic. Conclusions: The results corroborate the diagnostic and screening functions of the BESTest and MiniBESTest, respectively, and indicate that the Brazilian versions exhibit adequate reliability, construct validity, response stability, and capacity to distinguish among various balance ability levels in older adults and individuals with PD.

Keywords

Postural balance, physical therapy, Parkinson’s disease, older adults, cross-cultural adaptation, Rasch analysis.