CONSTRUCT VALIDITY AND RELIABILITY OF A PORTUGUESE VERSION OF THE ANIMATED ACTIVITY QUESTIONNAIRE (AAQ)

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Background: The AAQ assesses activity limitations in individuals with hip/ knee osteoarthritis (HKOA), and consists video animations of 17 basic daily activities performed with different levels of difficulty (www.myaaq.com). The individuals choose the animation that best matches their own performance. The AAQ was developed in the Netherlands, and showed a good overall cross-cultural validity in 6 other languages.

Objectives: The aims of this study were to assess the construct validity and reliability of the Portuguese version of the AAQ.

Methods: In Diamantina, Brazil, men and women (≥ 45 years) with clinical HKOA were included in the study. The exclusion criteria were: cognitive impairment, visual/auditory deficit, or any medical condition other than HKOA that could hamper activity. This study was approved by the UFVJM Ethics Committee. All participants completed the Portuguese version of the AAQ. Iliterate or functional illiterate participants were assisted by the researchers. The Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC), to assesses pain, stiffness and function was administered to the participants. Performance-based tests were applied to a subgroup of 71 participants: Timed Up and Go (TUG) and Short Physical Performance Battery (SPPB). The first 53 participants completed the AAQ twice. To validate the AAQ, Spearman’s rho coefficients were calculated between the AAQ score, each score of the WOMAC, the SPPB score, and TUG score. To evaluate the influence of education in completing the AAQ, the participants were divided in two groups, 0-3 years of education and ≥4 years of education. To evaluate internal consistency and test-retest reliability of the AAQ, we calculated the Cronbach’s alpha coefficient and the intraclass correlation coefficient (ICC), respectively.

Results: 200 individuals, 85% female, mean age of 64.4 (SD 11.2) years, and a mean of 5.8 (SD 4.4) years of education, participated in the study. 72% of the participants had knee OA, 9% had hip OA, and 19% had both joints affected. The mean values on the different measures were as follow: AAQ = 72.7 (SD 16.1), WOMAC pain = 36.5 (SD 19.3), WOMAC stiffness = 37.1 (SD 26.2), WOMAC function = 39.1 (SD 19.6), SPPB = 8.0 (SD 2.1), and TUG = 16.2 (SD 12.7) seconds. The AAQ showed high internal consistency (Cronbach’s alpha = 0.94) and good test-retest reliability (ICC = 0.98). The AAQ showed a moderate correlation with WOMAC pain (r = -0.51, 95%CI = -0.61 to -0.39), and WOMAC stiffness (r = -0.46, 95%CI = -0.56 to -0.33), and a high correlation with WOMAC function (r = -0.77, 95%CI = -0.82 to -0.71), SPPB (r = 0.65, 95%CI = 0.48 to 0.77), and TUG (r = -0.71, 95%CI = -0.81 to -0.56). Regarding the level of education, the correlations between the AAQ score and the three domains of the WOMAC were similar when the participants with 0-3 years of education (n = 62) were compared to the participants with ≥4 years of education (n=138) (pain: r = -0.51, 95%CI = -0.68 to -0.29 vs -0.52, 95%CI = -0.64 to -0.39; stiffness: r = -0.54, 95%CI = -0.70 to -0.32 vs -0.41, 95%CI = -0.54 to -0.25; function: r = -0.80, 95%CI = -0.88 to -0.78 vs -0.75, 95%CI = -0.82 to -0.68).

Conclusion: The Portuguese version of the AAQ showed good construct validity and reliability, and also seems to be applicable for patients with low literacy.

REFERENCES


VALIDATION OF THE DANISH VERSION OF THE BRISTOL RHEUMATOID ARTHRITIS FATIGUE QUESTIONNAIRES

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Background: The revised Bristol Rheumatoid Arthritis Fatigue Multidimensional Questionnaire (BRAF-MDQ) and the revised BRAF numerical rating scales (BRAF-NRSv2) are available in 33 languages and are validated in six countries (1), but not yet in Danish.

Objectives: To validate the Danish version of the BRAFs.

Methods: We surveyed patients with Rheumatoid Arthritis (RA) visiting one of three Danish outpatient clinics. The four-factor structure and internal consistency were explored by factor analysis and Chronbach’s α. The fatigue construct validity was tested by Spearman correlations with the SF-36 vitality subscale and the VAS-fatigue. Wider construct validity was tested by correlations with VAS-pain, VAS-fatigue, VAS-global, Hospital Anxiety and Depression Sub scales (HADS) and the Health Assessment Questionnaire (HAQ). We asked 120 of the patients to complete the BRAFs before and after their visit in order to be able to explore reliability.

Results: A total of 225 patients participated, 69.9% were female, mean (SD) age 59.0 (8.77), disease duration 11.1 (1.63) years, HAQ 0.71 (0.05) and DASS28-CRP 2.55 (0.08). The four-factor structure of the BRAF-MDQ and the revised BRAF-NRSv2 were confirmed. Internal consistency for the BRAF-MDQ total was a Chronbach’s α of 0.94 and 0.79-0.92 for the four subscales. The correlation coefficients between the BRAF-MDQ and the SF-36 vitality subscale were r=0.75, r=0.65 and r=0.74 for the anxiety and depression subscales of the HADS, respectively and r=0.62, r=0.73 and r=0.62 to VAS-pain, VAS-global and HAQ, respectively. The Intra Class Coefficient for agreement was 0.995. The Bland-Altman plot showed a mean difference of 1.9 and a variance of 9.8 (-6.8 to 3.0) for BRAF-MDQ with 95% confidence interval. The correlation coefficients for the BRAF-NRS subscales and the subsscales of the BRAF-MDQ, the SF-36 vitality subscale and the VAS-fatigue ranged between 0.57-0.93, 0.54-0.68 and 0.68-0.82, respectively.

Conclusion: The Danish version of the BRAF-MDQ identifies the same four aspects of fatigue as the original version, showed good internal consisteny, moderate-good construct validity reflected by similar correlations to the SF-36 vitality subscale, HADS, HAQ and VAS for pain, fatigue and global health as the original UK-version and good reliability. The BRAF-NRS had moderate construct validity. The Danish BRAFs are considered valid and reliable for identifying aspects of fatigue among Danish patients with RA.

REFERENCES