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.myaq.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 animation. This study was approved by the UFVJM Ethics Committee. All participants completed the Portuguese version of the AAQ. Illiterate or functional illiterate participants were assisted by the researchers. The Western Ontario and Mc master 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 was (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 -0.68 vs -0.75, 95% CI = -0.82 to -0.66).

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

REFERENCE