Concurrent validity of the Portuguese version of the Brief physical activity assessment tool

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Topic: Health Assessment and Intervention

Introduction: Physical activity (PA) is recognised as an important health enhancing behaviour and should be routinely assessed in clinical practice to identify insufficiently active people. Activity monitors, such as accelerometers, provide objective assessment of free-living PA being the preferred assessment method in research settings. However, they are too expensive to be used in resource-constrained clinical settings. Several PA questionnaires have already been validated to the European Portuguese but some of them take too long to complete, hence unfeasible for use in clinical practice. Shorter PA assessment tools are, therefore, needed.

Objectives: To explore the relationship between the Portuguese version of a short PA questionnaire, the Brief physical activity assessment tool (Brief-PA tool), and the International Physical Activity Questionnaire short form (IPAQ-sf), which is a valid and reliable PA assessment tool already tested in the Portuguese population. A secondary aim was to explore the test-retest reliability of the Brief-PA tool.

Methods: The Brief-PA tool[1] consists of 2 questions which assess the frequency and duration of moderate and vigorous PA undertaken in a 'usual' week. The total score is obtained by summing the results of the two questions (range 0-8). People with a score ≥4 are considered 'sufficiently active'. Since the tool is not available in Portuguese, a linguistic adaptation was conducted using the forward- and back-translation method. Then, 86 healthy volunteers (49.5±18.1 years, age range 20-69; 53 female) completed the Brief-PA tool and the IPAQ-sf. A sub-sample (n=56, 43.1±18.1 years, 37 female) completed the Brief-PA tool one week later. Spearman's rank correlation coefficient (ρ) was used to assess correlations between the Brief-PA total score with IPAQ-sf results (MET-min/week). Percentage of agreement ($\%_{agreement}$) and Cohen's kappa were used to assess the agreement between categorical scores obtained from the two measures (i.e., 'sufficiently' and 'insufficiently' active) and test-retest reliability of the Brief-PA tool.

Results: Significant correlations were found between the Brief-PA tool and the IPAQ-sf ($\rho=0.721$, $p<0.001$). The Brief-PA tool identified 34.8% sufficiently active participants while the IPAQ-sf identified 59.3%. Agreement between measures was moderate ($\%_{agreement}=70.9\%$, kappa=0.450). Test-retest reliability of the Brief-PA tool was substantial ($\%_{agreement}=89.3\%$, kappa=0.755).

Conclusions: The Brief-PA tool seems to be valid and reliable for assessing PA in the Portuguese adult population, although the agreement with the IPAQ-sf was only moderate. Further research assessing the validity of the Brief-PA tool with objective measures is needed.

[1]Marshall *et al*, Br J Sports Med. 2005;39:294-7.

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