

A Systematic Review on Measuring the Physical Activity Level and Pattern in Persons with Chronic Fatigue Syndrome

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Abstract : A lower activity level and imbalanced activity pattern are frequently observed in persons with chronic fatigue syndrome (CFS) / myalgic encephalomyelitis (ME) due to debilitating fatigue and post-exertional malaise (PEM). Identification of measurement instruments to evaluate the activity level and pattern is therefore important. The objective is to identify measurement instruments suited to evaluate the activity level and/or pattern in patients with CFS/ME and review their psychometric properties. A systematic literature search was performed in the electronic databases PubMed and Web of Science until 12 October 2016. Articles including relevant measurement instruments were identified and included for further analysis. The psychometric properties of relevant measurement instruments were extracted from the included articles and rated based on the COnsensus-based Standards for the selection of health Measurement INstruments (COSMIN) checklist. The review was performed and reported according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement. A total of 49 articles and 15 unique measurement instruments were found, but only three instruments were evaluated in patients with CFS/ME: the Chronic Fatigue Syndrome-Activity Questionnaire (CFS-AQ), Activity Pattern Interview (API) and International Physical Activity Questionnaire-Short Form (IPAQ-SF), three self-report instruments measuring the physical activity level. The IPAQ-SF, CFS-AQ and API are all equally capable of evaluating the physical activity level, but none of the three measurement instruments are optimal to use. No studies about the psychometric properties of activity monitors in patients with CFS/ME were found, although they are often used as the gold standard to measure the physical activity pattern. More research is needed to evaluate the psychometric properties of existing instruments, including the use of activity monitors.

Keywords : chronic fatigue syndrome, data collection, physical activity, psychometrics

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