# Review of: "Evaluation of the Psychometric Properties of the Health Assessment Questionnaire (HAQ) in a Population of Individuals With Multiple Sclerosis"

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Potential competing interests: The author(s) declared that no potential competing interests exist.

The Health Assessment Questionnaire (HAQ) has been translated into many languages. It has been used as a predictor of disability and medical costs by health professionals. The psychometric properties of the HAQ have never been studied in a population of patients with neurological conditions. The presented work aimed to assess the psychometric properties of HAQ in a population of patients with multiple sclerosis (MS). The validation of this measurement tool for patients with MS will provide the opportunity to analyze the treatment outcomes in patients with different neurological conditions. This cross-sectional study was performed in line with Consensus-based Standards for the selection of health Measurement Instruments (COSMIN).

A survey was conducted on a cohort of consecutive patients without a specific inclusion and exclusion criteria, except that the patients were diagnosed with MS, per the “McDonald’s” clinical diagnostic criteria for MS. The “McDonald’s” assesses the pattern of specific manifestations in patients with MS, however the authors have not specified additional criteria: demographic factors, time from diagnosis and co-morbidities. The point about co-morbidities is essential. Majority of patients may have respiratory and combined cardiovascular conditions, not always linked to the MS development. There is no information presenting the types of therapies that the patients had received. The treatment methods may vary, and some of the patients might be in the initial stage of therapy, while others receive regular treatment.

The HAQ questions are divided into eight sections: dressing, arising, eating, walking, hygiene, reach, grip, and activities. The Short Form Health Survey (SF-36) consists of eight scaled scores (vitality, physical functioning, bodily pain, general health perceptions, physical role functioning, emotional role functioning, social role functioning, and mental health). The domains of two instruments compared do not match sufficiently. The authors assessed the correlations, yet the internal consistency for domains in each questionnaire could be rather different. To get better results and match the domains of the questionnaires, the authors could have used two standard instruments for the comparison instead of using only the SF-36. The scoring system is adequately presented.

The authors conducted assessment of internal consistency for the HAQ and evaluated correlations between the domains of two questionnaires, The later seems not very clear, as domains in SF-36 are structured differently.

To make the validation complete there is a need to assess the content, criterion and construct validity of the questionnaire. The validity assessment is purpose specific or disease specific in this case. There is no information about the content validity testing. Content validity is sometimes referred to as face validity. It indicates whether the questionnaire instrument appears logical to a group of experts. The panel of experts usually includes multiple specialists from different medical fields. The HAQ is a well known instrument, yet there is a need to confirm its adequacy for the

assessment of MS patients.