

Evaluation of cognitive impairment is often omitted in multiple sclerosis (MS), as the available instruments usually require considerable time and resources, and are not readily available in all countries.

The aims of this study were to examine validity of the Czech translation of the MACFIMS (Minimal Assessment of Cognitive Function in MS), to validate the BICAMS (Brief International Cognitive Assessment for MS) and to compare outcomes of the MACFIMS and the BICAMS.

We evaluated 367 MS patients and 134 healthy controls with the MACFIMS battery, which also comprises the 3 tests of the BICAMS (Symbol Digit Modalities Test, Brief Visuospatial Memory Test-Revised, California Verbal Learning Test, second edition).

The most accurate BICAMS criterion of cognitive deficit was that of at least 1 of the overall 3 tests outside the normal range (sensitivity = 94%, specificity = 86%, $p=10-28$). Outcomes of the Czech translation of the MACFIMS were comparable to its original. The MACFIMS and the BICAMS identified cognitive deficit in 55% and 58% of the MS patients, respectively. Both the BICAMS and MACFIMS predicted patient vocational status.

The BICAMS is highly sensitive and specific to cognitive impairment in MS as defined by the MACFIMS. This impairment is significantly associated with vocational status. Our work is the first to validate Czech translations of the MACFIMS and the BICAMS.