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Modified Brief International Cognitive Assessment for Multiple Sclerosis (mBICAMS):
Towards Validating the First Arabic Version.

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Background: Cognitive performance is an indicator of disease progression in multiple sclerosis (MS). The Brief International Cognitive Assessment for Multiple Sclerosis (BICAMS) psycho-metric characteristics were not established in Arabic-speaking populations. The objective of this study was to validate and provide normative data for the BICAMS in Arabic.

Methods: In this cross-sectional study, we will administer the modified BICAMS (mBICAMS) to 184 healthy subjects with no history of neurological disorders, traumatic brain injury, psychiatric disorders, and cognitive impairment, age 16–90 years, and 50 patients with MS in addition to screening to exclude participants with depression and/or cognitive impairment. mBICAMS consists of three tests: Symbol Digit Modalities Test (SDMT), Brief Visuospatial Memory Test — Revised (BVMTR), and a newly developed Verbal Memory Arabic Test (VMAT).

Results: To date, 93 participants were screened (10 excluded and 5 participants dropped out). In all, 77 healthy subjects (43 females and 34 males) and 1 patient with MS completed the study, and retest was performed on 45 of these subjects after 21 days (mean age 29.5 ± 10.8 years). SDMT yielded 61.38 ± 8.96 correct answers (test–retest $r = 0.64$). On the VMAT, mean number of words recalled on the first five learning trials was 10.99 ± 1.49 , short delay recall 11.23 ± 2.29 , cued recall 11.53 ± 2.15 , long delay recall 11.88 ± 2.29 , cued recall 11.99 ± 2.24 , and recognition trial 43.45 ± 1.98 out of 45 words. VMAT showed acceptable test–retest reliability; $r = 0.43$. On the BVMT-R, participants scored 5.42 ± 2.42 on trial 1, 8.75 ± 2.42 on trial 2, and 10.42 ± 1.88 on trial 3 (test–retest Cohen's $d = 1.15$).

Conclusion: Recruitment and data collection are ongoing. Validating the mBICAMS allows accurate clinical use and research utilizations of these measures in the Arab world.