

Accepted Manuscript

Title: COGNITIVE-MOTOR INTERFERENCE DURING GAIT IN PATIENTS WITH MULTIPLE SCLEROSIS: A MIXED METHODS SYSTEMATIC REVIEW

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PII: S0149-7634(18)30126-X
DOI: <https://doi.org/10.1016/j.neubiorev.2018.08.016>
Reference: NBR 3205

To appear in:

Received date: 22-2-2018
Revised date: 28-6-2018
Accepted date: 28-8-2018

Please cite this article as: Postigo-Alonso B, Galvao-Carmona A, Benítez I, Conde-Gavilán C, Jover A, Molina S, Peña-Toledo MA, Agüera E, COGNITIVE-MOTOR INTERFERENCE DURING GAIT IN PATIENTS WITH MULTIPLE SCLEROSIS: A MIXED METHODS SYSTEMATIC REVIEW, *Neuroscience and Biobehavioral Reviews* (2018), <https://doi.org/10.1016/j.neubiorev.2018.08.016>

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COGNITIVE-MOTOR INTERFERENCE DURING GAIT IN PATIENTS WITH MULTIPLE SCLEROSIS: A MIXED METHODS SYSTEMATIC REVIEW

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Highlights

- • Multiple Sclerosis (MS) patients show significant Cognitive-motor interference (CMI).
- • The most sensitive motor variable detecting significant CMI in MS was double support.
- • Verbal Fluency proved to be sensitive and also specific to CMI in MS patients.
- • Clinical usefulness of CMI in the assessment of patients with MS is mentioned.

Abstract

Background.

Cognitive-motor interference (CMI) has been proposed as a valid marker of daily life impairment in Multiple Sclerosis (MS). The heterogeneity and scarce number of studies regarding CMI in MS has hampered the synthesis of the existing evidence. The present systematic review employed a mixed methods approach with the aim of identifying and describing variables under which CMI is particularly useful to assess patients with MS.

Results.

MS patients showed significant CMI. The motor variables that were most sensitive in detecting significant CMI were velocity (m/s), cadence (steps/min), and double support (% gait cycle), which was also specific for MS. Among the cognitive tasks, Alternate Alphabet and Serial Subtracting 7s were sensitive, whereas Verbal Fluency were both sensitive and specific to CMI in MS.

Conclusions.

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