

## **A Comparative Study of Cognitive Functions in Relapsing-Remitting Multiple Sclerosis Patients, Secondary-Progressive Multiple Sclerosis Patients and Normal People**

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**Abstract :** Background: Multiple sclerosis (MS) is one of the most common diseases of the central nervous system (brain and spinal cord). Given the importance of cognitive disorders in patients with multiple sclerosis, the present study was in order to compare cognitive functions (Working memory, Attention and Centralization, and Visual-spatial perception) in patients with relapsing-remitting multiple sclerosis (RRMS) and secondary progressive multiple sclerosis (SPMS). Method: Present study was performed as a retrospective study. This research was conducted with Ex-Post Facto method. The samples of research consisted of 60 patients with multiple sclerosis (30 patients relapsing-retrograde and 30 patients secondary progressive), who were selected from Tehran Community of MS Patients Supported as convenience sampling. 30 normal persons were also selected as a comparison group. Montreal Cognitive Assessment (MOCA) was used to assess cognitive functions. Data were analyzed using multivariate analysis of variance. Results: The results showed that there were significant differences among cognitive functioning in patients with RRMS, SPMS, and normal individuals. There were not significant differences in working memory between two groups of patients with RRMS and SPMS; while significant differences in these variables were seen between the two groups and normal individuals. Also, results showed significant differences in attention and centralization and visual-spatial perception among three groups. Conclusions: Results showed that there are differences between cognitive functions of RRMS and SPMS patients so that the functions of RRMS patients are better than SPMS patients. These results have a critical role in improvement of cognitive functions; reduce the factors causing disability due to cognitive impairment, and especially overall health of society.

**Keywords :** multiple sclerosis, cognitive function, secondary-progressive, normal subjects

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