

## The Differences and Similarities in Neurocognitive Deficits in Mild Traumatic Brain Injury and Depression

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**Abstract :** Depression is the most common mood disorder experienced by patients who have sustained a traumatic brain injury (TBI) and is associated with poorer cognitive functional outcomes. However, in some cases, similar cognitive impairments can also be observed in depression. There is not enough information about the features of the cognitive deficit in patients with TBI in relation to patients with depression. TBI patients without depressive symptoms (TBI<sub>nD</sub>, n25), TBI patients with depressive symptoms (TBI<sub>D</sub>, n31), and 28 patients with bipolar II disorder (BP) were included in the study. There were no significant differences in participants in respect to age, handedness and educational level. The patients clinical status was determined by using Montgomery-Asberg Depression Rating Scale (MADRS). All participants completed a cognitive battery (The Brief Assessment of Cognition in Affective Disorders (BAC-A)). Additionally, the Rey-Osterrieth Complex Figure (ROCF) was used to assess visuospatial construction abilities and visual memory, as well as planning and organizational skills. Compared to BP, TBI<sub>nD</sub> and TBI<sub>D</sub> showed a significant impairments in visuomotor abilities, verbal and visual memory. There were no significant differences between BP and TBI<sub>D</sub> groups in working memory, speed of information processing, problem solving. Interference effect (cognitive inhibition) was significantly greater in TBI<sub>nD</sub> and TBI<sub>D</sub> compared to BP. Memory bias towards mood-related information in BP and TBI<sub>D</sub> was greater in comparison with TBI<sub>nD</sub>. These results suggest that depressive symptoms are associated with impairments some executive functions in combination at decrease of speed of information processing.

**Keywords :** bipolar II disorder, depression, neurocognitive deficits, traumatic brain injury

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