

## عنوان مقاله:

Efficacy of Medication and Nonmedication Methods on Working Memory of Children With Attention Deficit and Hyperactivity Disorder

## محل انتشار:

فصلنامه فیزیولوژی عصبی روانشناسی، دوره 2، شماره 2 (سال: 1394)

تعداد صفحات اصل مقاله: 5

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## خلاصه مقاله:

Background: Working memory is the ability to keep and manipulate information in a short time. Children with attention deficit and hyperactivity disorder (ADHD) are among the people suffering from deficiency in the active memory, and this deficiency has been attributed to the problem of frontal lobe. This study utilized a new approach with suitable tasks and methods for training active memory and assessment of its effects. Objectives: This study aimed to investigate the effectiveness of medicinal and behavioral therapies on working memory of children with attention deficit and hyperactivity disorder. Patients and Methods: The children participating in this study were 7 - 15 years old, and were diagnosed with ADHD by the psychiatrist and psychologist based on DSM-IV criteria. The intervention group comprised 8 boys and 6 girls with the average age of 11 ( $\pm 2$ ) years, and the control group comprised 2 girls and 5 boys with an average age of 11.4 ( $\pm 3$ ). Three children in the test group and 2 in the control group were under medicinal therapy. Results: Training of working memory significantly improved the performance in nontrained areas as visual-spatial working memory as well as the performance in Raven progressive tests which are a perfect example of nonverbal, complicated reasoning tasks. Conclusions: The performance of working memory improved through training, and these trainings extended to other areas of cognition functions not receiving any training. Trainings resulted in the improvement of performance in the tasks related to prefrontal area. They had also a positive and significant impact on the movement activities of hyperactive children.

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