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## Comparison of the Effect of Motor Independent/Dependent Visual Perception Practice on Visual-Motor Activity Disorder

### Abstract

**Background:** The results of previous studies have shown that children with attention deficit-hyperactivity disorder (ADHD) have problems with visual-motor skills. Based on this, the present study was conducted with the aim of comparing the effects of motor-independent and motor-dependent visual perception practice on the visual-motor integration of children with attention deficit hyperactivity disorder.

**Methods:** This study was a quasi-experimental study with a pretest-posttest design with two experimental groups and one control group. The statistical population was all children aged 4 to 6 years in Tehran city in 2022 who had been referred to Ali Asghar Hospital. After screening, 45 of these people were selected as the research sample. Subjects were divided into three groups: motor-dependent visual perception, motor-independent perception, and control. Subjects in the experimental groups received 15 minutes of 45-session training, while the control group received no intervention. All participants were assessed before and after training using the Bender Gestalt test. The data were analyzed using multivariate analysis of covariance.

**Results:** The results showed that the subjects of both test groups had a significant improvement in the total score of visual-motor integration and all its components compared to the control group. Also, the results showed that the subjects in the movement-dependent group obtained a higher improvement in the copy and movement components compared to the motor-independent group.

**Conclusion:** Based on the results of the present study, the use of motor-independent or motor-dependent visual perception practice can be suggested as an effective intervention to improve the visual-motor integration of children with ADHD.

**Keywords:** Attention deficit hyperactivity disorder, Visual-motor integration, Motor independent / Dependent visual perception practice