



Inhibitory Control Training Improves ADHD Symptoms

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ABOUT THE STUDY

Most cognitive and behavioral disorders in children with attention deficit hyperactivity disorder (ADHD) result from impaired inhibitory control. Attention deficit hyperactivity disorder is characterized by two major classes of symptoms, including inattention and impulsive hyperactivity, which results in significant impairment of social and academic function [1]. At the cognitive level, several cognitive theories have been developed to explain these behavioral symptoms. Executive function disorder (EF) is a well-documented cognitive theory in ADHD. EF is a collective term for a set of cognitive functions with different levels of overlap and interaction. Therefore, different theories consider different areas to study EF. Viewed EF as flexibility in thinking, restraint, problem-solving, planning, impulse control, concept formation, abstract thinking, and creativity. The domain of EF was defined as planning, working memory, attention, suppression, self-monitoring, self-regulation, and initiation.

Suppression control refers to the ability to suppress or withhold dominant and/or inappropriate reactions in order to perform appropriate and / or effective reactions in goal-oriented behavior. Full restraint control allows individuals to coordinate and direct their behavior, especially in social and emotional situations. Theoretical cognitive models and cognitive rehabilitation are mutually beneficial. On the one hand, theoretical models instruct therapists to target cognitive areas for evaluation and intervention. Cognitive rehabilitation without a theoretical backbone is like a vehicle without an engine. Cognitive rehabilitation, on the other hand, provides experimental evidence of model component interactions [2-4].

The improvement in externalization problems after suppression control training in this study showed that these behavioral problems were due to inadequate suppression control. Correlation studies have found a correlation between externalized behavior and inhibitory control in both preschoolers and school children [5]. There is a link between externalized behavior and ADHD symptoms and their emotional function. Several intervention studies have found

a positive effect of suppressive control training on improving externalized behavior in preschool children [6,7].

Some studies have found that gain transmission in suppression control training is widely transmitted to other cognitive areas such as problem-solving and working memory without perceptible transmission to other suppression control tasks. Given the new conceptualization of transmission as vertical and horizontal transmission, all cognitive regions examined in Aymune's study fall into the horizontal transmission category. Although horizontal transfer can be regarded as an indicator of training effectiveness, the main factor that guarantees the generalization of laboratory-to-life intervention is vertical transmission from cognitive function to behavior. Some researchers have found that there is no communication effect from inhibitory training on some behaviors, such as feeding behavior. However, computer-based suppression control training has been found to be applicable to several behavioral skills such as self-regulation, appetite management, health-related behaviors, and academic performance. The controls in this study are undergoing a regular kindergarten program. It would be better if there was another intervention in the control group.

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