

Utility of Executive Function Training in Typically Developing Adolescents and Special Populations: A Systematic Review of the Literature

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Abstract : Adolescence is a critical phase of development in which individuals are prone to more risky behavior while also facing potentially life-changing decisions. The balance of increased behavioral risk and responsibility indicates the importance of executive functioning ability. In recent years, executive function training has emerged as a technique to enhance this cognitive ability. The aim of the present systematic review was to discuss the reported efficacy of executive functioning training techniques among adolescents. After reviewing 3110 articles, a total of 24 articles were identified which examined the role of executive functioning training techniques among adolescents (age 10-19). Articles retrieved demonstrated points of comparison across psychiatric and medical diagnosis, location of training, and stage of adolescence. Typically developing samples, as well as those with attention-deficit hyperactivity disorder (ADHD), autism spectrum disorder (ASD), conduct disorder, and physical health concerns were found, allowing for the comparison of the efficacy of techniques considering physical and psychological heterogeneity. Among typically developing adolescents, executive functioning training yielded nonsignificant or low effect size improvements in executive functioning, and in some cases executive functioning ability was decreased following the training. In special populations, including those with ADHD, (ASD), conduct disorder, and physical health concerns significant differences and larger effect sizes in executive functioning were seen following treatment, particularly among individuals with ADHD. Future research is needed to identify the long-term efficacy of these treatments, as well as their generalizability to real-world conditions.

Keywords : adolescence, attention-deficit hyperactivity disorder, executive function, executive function training, traumatic brain injury

Conference Title : ICCCAP 2022 : International Conference on Clinical Child and Adolescent Psychology

Conference Location : Vancouver, Canada

Conference Dates : May 23-24, 2022