Evaluation of motor proficiency and adiponectin in adolescent students with attention deficit hyperactivity disorder after high-intensity intermittent training

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Abstract

Attention deficit hyperactivity disorder (ADHD) is a chronic condition with frequent comorbidities such as obesity, troubled relationships, low self-esteem, and difficulty in motor proficiency. This study aims to elucidate the effect of high-intensity intermittent training on motor proficiency, adiponectin, and insulin resistance in adolescent students with ADHD disorder. Fifty adolescent students of both genders with ADHD diagnosis participated and assigned into four experimental groups (each group with 15 girls and 10 boys students; two experimental and two control groups). High-intensity intermittent training was performed continuously 3 times a week for 6 weeks in experimental groups. Serum adiponectin level significantly increased in the experimental groups of both genders after 6 weeks intermittent training while insulin resistance levels were markedly decreased. Furthermore, motor proficiency score were significantly improved in the experimental groups of both genders. In addition gender had no significant impact on adiponectin, insulin resistance and motor proficiency rating. The findings of this study suggest that high intensity intermittent training improved physiological systems in ADHD population that leads to reduce risk factors for future development of comorbidities.