Investigation the effect of high intensity interval training on serum adiponectin levels and motor proficiency in girls with attention deficit hyperactivity disorder

Farnaz Torabii, Sepideh Safakish, Abolfazl Farahani, Azam Ramezankhani


Abstract

Background:
The aim of the present study was to investigate the effect of high intensity interval training on serum adiponectin changes and motor proficiency in adolescent girls with ADHD.

Materials and Methods:
In a quasi-experimental study, 30 adolescent girls with ADHD (12/4±5/2yrs.) were randomly allocated to high intensity interval training (n=15) and control groups (n=15). The training protocol included 20 meters running 3 times a week, with the repetitions of 4 times at the first and second week, the repetitions of 5 times at the third and fourth week and the repetitions of 6 times in the fifth and sixth week for six weeks. At the beginning and end of the sixth week, anthropometric indices, adiponectin levels, insulin resistance index (HOMA-IR) and scores of motor skills were assessed. For comparison of data in two groups, after making use of normalizing data distribution test (Shapiro-Wilk), independent t test was performed (α=0/05) with SPSS16 software.

Results:
Research findings showed that after 6 weeks, there were significant differences in serum adiponectin levels, HOMA-IR, Body mass index, body fat percent and mean scores of motor skills between experimental and control groups (p<0.05).

Conclusion:
Therefore, it seems that high intensity interval training can play an effective role in reduction of weight loss, increasing level of serum adiponectin levels and improvement of motor skills in children with ADHD.