The effect of eight weeks of neuromuscular coordination training on physiological, skill and physical factors of teenage football players

Poster Presentation

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Abstract

Introduction: Analysis of movement patterns in football matches has led researchers to conclude that in addition to paying attention to the development of physiological indicators of players, to emphasize the development of their skills and functional abilities during the match. The aim of the present study was to investigate the effect of eight weeks of neuromuscular coordination training on physiological, skill and physical characteristics of soccer teenage football players.

Methods: Thirty volunteer soccer teenage football players were selected by purposeful sampling method and were randomly assigned to control (n = 15, mean ±SD age: 15/49± 8/8 years old)) and experimental (n =15, mean ±SD age: 15/35± 8/1 years old) groups. After pre-test in physiological, skill and physical indicators of players of both groups, subjects in the experimental group performed an eight-week course of neuromuscular coordination (three sessions of 45 minutes) training while, the control group continued their normal activity. After completing the exercises, both groups participated in the post-test phase and passed the physiological, skillful and physical tests again and the data obtained from the tests were collected for analysis. Shapiro-Wilk test was used to compare the normal data. The data were analyzed through independent t test, paired sample t test, Wilcoxon and U-man-Whitney test (P≤0/05) by using SPSS version 24.

Results: The results of this study showed that eight weeks of neuromuscular coordination did not have a significant effect on resting heart rate, systolic blood pressure, diastolic blood pressure and body fat percentage (P>0/05). But eight weeks of neuromuscular coordination work has a significant effect on speed, agility, aerobic capacity, and anaerobic power of soccer players and on passing skills, shuffling skills, and skill in dribbling, football teenagers (P≤0/05).

Conclusion: According to the results of this study, neural coordination exercises improved the performance of teenage football players. Therefore, it is recommended that basic trainers use neuromuscular training to improve the indicators of physical fitness, speed, agility, aerobic power and anaerobic power, as well as skill indicators of passing, shooting and dribbling in their training programs.

Keywords

Neuromuscular training; skill; Physiological; physical; football