

Abstract

Title:

Perception training in tennis

Objectives:

The main goal of this paper is to assess the impact of perceptual-cognitive training on the development of anticipatory skills in expert and novice tennis players.

Methods:

The result of this paper was obtained using an experiment based on the test-retest method. It is a randomized controlled trial in which the intervention groups underwent three weeks of perceptual-cognitive training in addition to the test and retest process. All parts of the experiment (test, perceptual training, retest) were based on watching edited video recordings of tennis serves using the temporal occlusion technique. The tracked variable in the experiment was the relative accuracy of responses.

Results:

In the intervention group of expert tennis players, a significant difference was reported between test and retest performance ($p < 0.01$; $d = 1.05$). No statistical significance was observed in the intervention group of tennis novices or in any of the control groups. Since the intervention and control groups of expert tennis players did not differ in the test stage, the observed increase in performance was attributed to the effect of applied perceptual-cognitive training. The statistically significant increase in relative accuracy of responses between test and retest occurred under two occlusion conditions corresponding to the moments immediately before and after the racket-ball contact. The results can be exploited as an argumentative basis for applying the training method into coaching practice as a targeted method for developing the anticipation skills of tennis players.

Keywords:

tennis, anticipation, perception, perceptual-cognitive training, temporal occlusion