

Abstract

Title: Visual constraints and feedback in the badminton serve

Objectives: The aim of this thesis was to investigate the effect of short serve feedback constraints in badminton players.

Methods: The data were experimentally collected. Twelve players underwent measurement of backhand serve. Every player performed four series of 20 serves. First and fourth were played with occlusion, second and third in normal conditions. Their results were recorded on a video camera and then evaluated by indirect analysis.

Results: Overall, the players recorded an average distance of the shuttlecock impact point from the service line in the occluded conditions of $40,7 \pm 22,2$ cm in the normal conditions of $25,2 \pm 17,9$ cm. These results showed a significant effect of occlusion on short backhand serve $t(9)=4,98$, $p<0,001$ and with a strong effect of $d=1,44$. Out of 960 total backhand serves, 63 were ruled out. Players played 11 outs in occluded conditions, 52 in normal conditions.

Keywords: visual perception, occluded vision, motor skills, proprioception, game performance