

The Acute Effects of Accommodation Convergence Training on Visual Performance in Amateur Badminton Players

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ABSTRACT

The objective of this study was to evaluate the acute effects of accommodation convergence training using pencil push-up training (PPT) for 10 minutes on visual performance, i.e., amplitude of accommodation (AA), accommodation facility (AF), and near point of convergence (NPC) in amateur badminton players. Twenty-eight amateur badminton players aged between 18-25 years old were divided into two groups; badminton players with eyes training group (BT, n=14) without eyes training group (BU, n=14). The BT group practiced PPT for 10 minutes, whereas the BU group was asked to maintain their normal activities throughout the experimental period. The values of AA and NPC were measured using the Royal Air Force rule (RAF rule) and the values of AF were measured using a ± 2.00 flipper lens. The results showed that compared to pre-and post- PTT training, the BT group had an improvement in mean values of AA, AF, and NPC (all, $P < 0.05$) but no change was found in the BU group. The BT group also perform the AA and AF better than the BU group, whereas the mean value of NPC was not different between the two groups. The finding indicates that a 10-minutes accommodation convergence training using PPT offer beneficial effects on visual performance in badminton players and therefore might be a valuable guideline for coaches and athletes to incorporate visual exercise into their racquet training programs in the future.

Keywords: Pencil push-up training; Visual performance; Visual ability; Badminton players

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