EFFECTIVENESS OF SPORTS VISION TRAINING

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Introduction Users of sports vision trainings (SVT) are promised an increase in visual performance (related to sports). So far there is, however, no evidence for SVT’s efficiency, which on the one hand is due to the lack of scientifically adequate studies. On the other hand in the remaining studies no significant positive effects on visual or sports related performance are reported. The aim of the present study was a comparison between a SVT, currently (also) used in high performance sports, including a series of coordinative, visual-dynamic, eye moving and stereoscopic exercises and a placebo type exercise that only worked with exercises on a screen. Methods The participants were randomly split up into one experimental (n=18; mean age 22.6±3.0 years) and one placebo group (n=16; mean age 22.9±3.6 years) after collecting pre-training data which next to visual acuity examined peripheral vision, stereoscopic vision and depth perception, the afferent and efferent dynamic visual acuity, anticipation performance as well as the reaction time. Three times a week all subjects participated in a 60-minutes training under the instruction and supervision of sports vision trainers, either at five different training stations from sports vision (experimental group) or at the screen and with the “Augen-Training TM” by Nintendo® (placebo group). After training the above-mentioned visual performance diagnostics were carried out again (by a “blinded” test supervisor). Results In the visual performance diagnostics none of the eight visual parameters examined showed group specific significant differences attributable to the SVT. This holds for the two most focussed training goals/variables, stereoscopic vision/depth perception (three test series with the help of the three-rod-test according to Helmholtz: p=0.645, p=0.208, p=0.837) and movement perception (afferent: p=0.207) or oculomotor performance (efferent: p=0.949). Therefore no effects on visual performance followed from the SVT. Discussion The results from the present RCT-study confirm previous findings by Abernethy and Wood (2001) and van Velden (2010), assessing SVT as an ineffective method for improving the performance of perception and vision. The fundamental ability to train individual components of visual performance (e.g. oculomotor performance) was often discussed and is scientifically established. However, generalized (nonspecific) SVT under the presently investigated conditions lacks effect-focused specificity. References Abernethy B, Wood J M (2001). Do generalized visual training programmes for sport really work? An experimental investigation. Journal of Sports Sciences, 19(3), 203-222. Velden D van (2010). The effect of a perceptual-motor training programme on the coincident anticipation timing and batting performance of club cricket players. Stellenbosch University. Contact jessica.cordes@rub.de