Sport Psychology: Linking theory to practice

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The influence of cognitive effort on the efficiency of tactical behavior of young soccer players

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The pupilometry technique has been used to evaluate the activities of the nervous system, in different tasks. Research shows that small changes in pupil diameter occurs in responses to mental activity. Researchers have demonstrated in a numerical recall experiment that the pupils progressively dilate as a greater degree of cognitive effort (CE) is requested and, as the requirement effort becomes smaller, the pupils gradually return to their resting size. In sport, this pupilometry technique has been used to evaluate CE during tasks that measure the abilities of decision making, anticipation, knowledge, among other cognitive components. However, studies about the relationship of CE and the tactical component of the game need to be investigated, so this study aims to investigate the influence of CE on the efficiency of tactical behavior (ETB) of young soccer players. The sample comprised of 52 male youth soccer player of the first division in Brazilian Championship (Mean age = 14.89, SD = 1.42). The ETB was measured through the System of Tactical Assessment in Soccer (FUT-SAT). The conceptual structure of FUT-SAT is based on the ten core tactical principles of soccer. For the evaluation of the CE, tests of video simulations using Mobile Eye Tracking-XG were used. After data collection, players were divided into two groups based on the amount of CE during the task. Statistical analysis was performed using the Kolmogorov-Smirnov tests. The independent t test for comparison of the ETB between groups with higher and lower CE. The results suggests differences in the ETB of players based on the amount of CE t(50)=7.522, p<0.001, r=.72. Players with less ETB presented greater CE during the task. It is concluded that the CE influences the ETB of soccer players, with the less CE the better ETB.

Keywords: soccer, cognitive effort, efficiency of tactical behavior, evaluation

A low-intensity psychological intervention to prevent sport injuries: the adaptation of the “Mental Warmup for Athletes” program to Spanish young soccer players

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This study presents the Spanish adaptation of the “Mental Warmup for Athletes” program (Brewer, 2006). The program consists of a low-intensity intervention based on stress management and attention focus in order to reduce the prevalence of sports injuries (SI). SIs are a multifactorial phenomenon involving different variables. Psychological factors have also shown to be strongly related to the vulnerability to sustaining an injury. Particularly, stress response has been pointed out as responsible for making athletes more vulnerable to sustain an SI. According to the Stress and Injury Model (Andersen and Williams, 1998), two mechanisms mediate the relationship between stress response and SI: muscle tension and the attention deficits. There have been several attempts to reduce the prevalence of SI using psychological interventions, but results were inconclusive partially due to implementation issues. In light of the fact that many sports and/or categories, particularly among young athletes, still do not have psychologists to provide such mental training and contribute to the prevention of sport injuries, the program designed is a non-facilitated and guided self-help low-intensity intervention were the coach supports the activities and several online self-help materials, including scripts and videotapes, are provided. The script presented includes techniques such as Mindfulness, Diaphragmatic Breathing, Progressive Muscle Relaxation, and Visualization. Implementation is conducted to reduce the anxiety levels and increase the attentional focusing of young players right before the competition. Results of a pilot administration of the program are shown.

Keywords: prevention, sports injuries, psychological intervention, mental warmup