Visual search strategy of soccer players according to different age groups

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Abstract

Visual search has been considered one of the most important aspects within the process of decision-making in soccer (Williams and Davids, 1998). Literature shows that there are differences on visual search between different competitive levels but in relation to different age groups further investigation is still necessary. The sample comprised 51 youth soccer players. The instrument used to collect and analyse data was the Mobile Eye Tracking – XG (Applied Science Laboratories, Bedford, MA, EUA). This system is used to verify gaze behaviour through visual focus. Players were grouped according to their age group: U-13 (17), U-15 (17), U-17 (17). Video stimuli were the same as that employed by Mangas (1999). Visual search stimuli were grouped in five categories: “player in possession of the ball”; “ball”; “teammates”; “opponent”; “space”. The number of fixations made by players, in each stimuli category was analysed. Data distribution was verified through Shapiro-Wilk’s test. One-way ANOVA was performed to compare mean values between the three groups. Results displayed significant differences in one of the categories. The “space” category displayed significant differences between U-13 (74.35±12.41), U-15 (58.78±14.22) and U-17 (61.88±16.44). No other significant differences were found in other categories. These findings are related to the specific sports development phase of each age group. The U-13 was the category that employed most of the visual search related with “space” unlike the U-15 and U-17 age groups. These differences might be related to the specific knowledge of soccer, which is usually lower in younger players. These findings are important for coaches and researchers to understand how visual search strategy change according to the age group.

Keywords: Soccer; Visual Search Strategy; Age Group.

References


Acknowledgements

This study was funded by the State Department of Sport and Youth of Minas Gerais (SEEJMG) through the State Act of Incentive to Sports, by FAPEMIG, CAPES, CNPQ, FUNARBE, the Dean’s Office for Graduate and Research Studies and the Centre of Life and Health Sciences from Universidade Federal de Viçosa, Brazil.