Cognitive flexibility and tactical behavior of soccer players

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Introduction: Cognitive flexibility refers to the ability in adjust knowledge according task demands. This ability may influence different aspects in performance, among them, tactical component. The aim of this study is to compare the cognitive flexibility and tactical behavior between soccer players.

Methods: The sample comprised 100 U-15 youth soccer players. The instruments used to evaluate cognitive flexibility and tactical behavior were, respectively, the Wisconsin Card Sorting Test (WCST) and the System of Tactical Assessment in Soccer (FUT-SAT). FUT-SAT enables the evaluation of the ten core tactical principles of soccer game: (i) penetration; (ii) offensive coverage; (iii) depth mobility; (iv) width and length; (v) offensive unity; (vi) delay; (vii) defensive coverage; (viii) balance; (ix) concentration; and (x) defensive unity. To calculate the tactical behavior, the accuracy rate of the tactical actions in each principle performed by players was considered. To calculate cognitive flexibility, the number of categories completed by players in WCST was considered. Cognitive flexibility data was grouped in tertiles (low, moderate and high). Players from 'low' and 'high' tertiles had their values compared with respect to their tactical behavior.

Kolmogorov-Smirnov and Mann-Whitney tests (P<0.05) were performed through SPSS for Windows®.

Results: Statistically significant differences were observed between cognitive flexibility and tactical behavior of soccer players for the tactical principle of depth mobility (U=156.5; P=0.03). No statistically significant difference was found for any of the other tactical principles.

Conclusion: It is concluded that cognitive flexibility influenced tactical behavior, specially the principle of depth mobility.

Keywords: Soccer, Cognitive Flexibility, Tactics.