

**TITLE**

Developing cognitive and motor decision-making skills through tactical principles and Game Sense Approach in youth soccer

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### **P061| Developing cognitive and motor decision-making skills through tactical principles and Game Sense Approach in youth soccer**

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**Introduction:** Research on sports development in soccer showed that perceptual-cognitive and perceptual- motor decision-making skills are essential to be developed during sports formation. In this line, research in sports pedagogy has demonstrated that approaches focusing on inquiry-based strategies, such as the Game Sense Approach, provide a rich environment to foster the players' decision-making and tactical skills. In this context, tactical principles have been pointed out as an important part of soccer curriculums during sports formation. However, up to date, no research addressed the assessment of perceptual-cognitive decision-making skills and their interaction with perceptual-motor skills in interventions with tactical principles.

**Purpose:** This study aimed to verify the influence of 25 training sessions based on tactical principles and the Game Sense Approach in developing cognitive and motor decision-making skills of U-12 soccer players.

**Methods:** Participants were 25 U-12 elite male soccer players ( $12.0 \pm 0.2$  years) from a Brazilian first division national club. Perceptual-cognitive decision-making skills (quality and response time) were assessed with an objective video-based test (TacticUP®). Perceptual-motor decision-making skills (tactical efficiency) were assessed with FUT-SAT. Both instruments were developed based on the same theoretical background (core tactical principles of soccer). The 25 training sessions were organized based on the Game Sense Approach and the core tactical principles of soccer. The within-group differences among pre- and post-test were verified through a paired sample t-test or Wilcoxon test.

**Results:** Results showed improvements ( $p < 0.05$ ) in: 1) perceptual-cognitive decision-making skills related to the decision-making time for both offensive and defensive actions; and 2) perceptual-motor skills for defensive actions. We also found unexpected results for the quality of decision-making. It decreased for the defensive phase in post-test.

**Conclusions:** We concluded that 25 training sessions based on core tactical principles and the Game Sense Approach improved perceptual-cognitive related to decision time and perceptual-motor decision-making skills. Improvement of decision-making time apparently is related to improvement in tactical efficiency of U -12 soccer players. To the best of our knowledge, it was the first study to use complementary information about perceptual-cognitive (TacticUP®) and perceptual-motor (FUT-SAT) decision-making skills based on the same theoretical background (core tactical principles).

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