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Relationship between coach-rated performance, physical fitness, skill performance, and mental skills in youth soccer players

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Introduction

Coach-rated player performance has been considered as an important performance indicator in youth soccer. However, soccer is a multifaceted sport and various technical, physical, and mental skills can contribute to overall performance and development in the context of youth sport. Accordingly, this study sought to investigate the link between coach-rated performance and various factors such as physical fitness, technical skills, executive function, and creative thinking in youth soccer players.

Methods

This study included 28 elite youth soccer players aged 9-11 years. They were administered a battery of tests including standing long jump, 20-m sprint, Illinois agility test, motor coordination test, and aerobic capacity to measure physical fitness, Illinois agility dribble test to measure soccer technical skill, Dimensional Change Card Sort task to measure executive function, and Alternative Uses Test to measure creative thinking. The players performance was rated by three certified coaches from the Asian Football Confederation based on eight soccer-specific skills: ball control in dribbling, passing and trapping, duel tackles, rapidity of actions, finding appropriate solutions under pressure, taking relevant decisions situationally, and studying group/team plays. The relationship between these variables was analyzed using the Pearson product-moment correlation coefficient, controlling for age, body mass index, and socioeconomic status.

Results

Our results showed that coach-rated performance was significantly correlated with all physical fitness [standing long jump ($r = .51$, $p = .011$), 20-m sprint ($r = -.48$, $p = .017$), Illinois agility test ($r = -.59$, $p = .003$), motor coordination test ($r = -.88$, $p < .001$), and aerobic capacity ($r = .74$, $p < .001$)] and soccer technical skill tests [Illinois agility dribble test ($r = -.59$, $p = .002$)]. In addition, fluency ($r = .42$, $p = .046$) and flexibility ($r = -.52$, $p = .009$) indicators of the creative thinking test were correlated with coach-rated performance, but originality was not ($r = .24$, $p = .25$). However, executive function performance was not correlated with coach-rated performance ($r = -.17$, $p = .44$).

Discussion

Our findings suggested that coaches and talent development professionals should consider the importance of physical fitness, technical ability, and creative thinking when evaluating and developing elite youth soccer players. Furthermore, these findings highlight the need for a multidimensional approach to assessing player performance, as coach ratings may not always align with measures of mental skills such as cognitive function. Further research is needed to validate these findings in youth soccer players at different levels of competition.

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