

A Study of Executive Functions in Youth Soccer
Players: A Systematic Review

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ADMINISTRATIVE INFORMATION

Support - Self-financing.

Review Stage at time of this submission - Risk of bias assessment.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 10 September 2026 and was last updated on 10 September 2026.

INTRODUCTION

Review question / Objective What is the scientific evidence regarding executive functions in youth boys' soccer by age group and their relationship to talent identification and selection, developmental progress, cognitive-motor interventions, tactical assessment, in-game performance, athletic performance, and the characteristics of the geographic context?

Condition being studied A Study of Executive Functions and Their Impact on Boys' Youth Soccer.

METHODS

Search strategy The following databases were consulted for this review: PubMed, Scopus, Web of Science, Cochrane, and Sports Discuss.

Participant or population 1. Male participants in youth soccer.

2. Players at any competitive level: recreational, youth development, college, professional, or national teams.

3. Players within an approximate age range of 10 to 18 years old.

Intervention 1. Studies that explicitly assess one or more executive functions (working memory, cognitive flexibility, inhibitory control, planning, decision-making).

2. Research using standardized and psychometrically validated instruments, neuropsychological batteries, and computerized executive function tasks.

3. Studies reporting systematic observation systems for tactical behavior applied in ecologically valid contexts directly related to soccer.

Comparator 1. An explicit comparison between competitive levels (youth vs. college or professional).

2. Studies that compare players by position (defenders, midfielders, forwards, goalkeepers).

3. Research that explains the level of skill within the expert-novice paradigm.

Study designs to be included This review will include original empirical studies with a quantitative approach, using observational designs (cross-sectional, longitudinal, cohort, and case-control studies) or pre-experimental, quasi-experimental/experimental studies, and controlled trials. Articles published in scientific journals.

Eligibility criteria Cognitive functions.

Information sources The planned information sources include Scielo, EBSCO, and Google Scholar.

Main outcome(s) Formulation of the research question: May

Literature review: June–July

Selection of studies for inclusion: August

Assessment of study quality: August

Document drafting:

Chapter 1. Introduction, problem statement, research question, objectives, rationale. Friday, September 4

Chapter 2. Theoretical framework, background, conceptual framework, regulatory framework. Friday, September 18

Chapter 3. Methodological framework (approach, design, scope, data extraction, and systematization). Friday, October 2

Chapter 4. Results (tables and study summaries) and discussion. Friday, October 16.

Chapter 5. Limitations, future directions, practical applications, and conclusions. Friday, October 31.

Quality assessment / Risk of bias analysis To assess the quality of the studies, a JBI methodological assessment table will be used to analyze potential risks of bias.

Strategy of data synthesis The data will be analyzed through a process of extraction, evaluation, grouping, and statistical analysis in order to synthesize the data obtained.

Subgroup analysis Age, developmental progress, cognitive-motor interventions, tactical assessment, game performance, athletic performance, characteristics of the geographic context.

Sensitivity analysis For the sensitivity analysis, studies with a high risk of bias or poor methodological quality were excluded.

Language restriction No language restrictions will be imposed; scientific articles in any language will be considered.

Country(ies) involved Colombia.

Keywords Executive functions, youth soccer, youth soccer players.

Contributions of each author

Author 1 - Pablo Cesar Palacios Peña - The author contributed to the drafting of the manuscript.

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Author 2 - Dowglass Suárez Manrique - The author contributed bibliographic and statistical expertise.

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