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# The Impact of Small-Sided Games on Agility and Change of Direction in Youth Soccer Players: A Systematic Review Protocol

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## **ADMINISTRATIVE INFORMATION**

Support - Personal.

Review Stage at time of this submission - Piloting of the study selection process.

Conflicts of interest - None declared.

**INPLASY registration number:** INPLASY202440006

**Amendments -** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 02 April 2024 and was last updated on 02 April 2024.

#### INTRODUCTION

Review question / Objective This systematic review was conducted to assess the impact of small-sided game programs on change of direction speed and agility in youth soccer players.

Rationale The proposed systematic review aims to investigate the effects of small-sided game interventions on agility and change of direction abilities among youth soccer players. Given the growing popularity of small-sided games in soccer training programs and their potential to enhance specific physical attributes crucial for on-field performance, such as agility and change of direction speed, a comprehensive review of the existing literature is warranted. This systematic review seeks to synthesize and critically evaluate the available evidence to provide insights into the

effectiveness of small-sided games in developing agility and change of direction skills among youth soccer players. By systematically analyzing the relevant studies, this review intends to identify the most effective small-sided game training protocols for optimizing agility and change of direction performance in youth soccer.

Condition being studied In this systematic review, the condition being studied revolves around the impact of small-sided games programes (min 4 weeks) on agility and change of direction abilities in youth soccer players.

#### **METHODS**

**Search strategy** Electronic databases Web of Science, PubMed and Scopus., using following keywords: (soccer OR football) AND (youth OR young OR child OR adolescent OR junior) AND

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(agility OR change of direction OR directional changes) AND (small-sided games).

**Participant or population** Youth soccer players, aged up to a maximum of 19 years old, regardless of gender, who are free from any injury.

**Intervention** Small-sided games programs lasting a minimum of four weeks.

Comparator Passive or active control groups.

Study designs to be included Randomized Trial.

Eligibility criteria Inclusion Criteria: (i) healthy male or female soccer players aged between 6 and 19 years; (ii) small-sided games programs lasting a minimum of 4 weeks; inclusion of small-sided games combined with other programs is acceptable; presence of a passive or active control group; (iii) availability of pre-post intervention values for change of direction and agility; (iv) randomized trials; (v) peer-reviewed original fulltext articles written in English. Exclusion Criteria: (i) participants involved in sports other than soccer, those older than 19 years, or individuals with injuries or other medical conditions; (ii) Interventions other than small-sided games, or interventions lasting less than 4 weeks; (iii) absence of a passive or active control group; (iv) outcomes other than change of direction and agility: (v) non-randomized studies. Articles written in languages other than English, as well as reviews, conference abstracts, book chapters, and editorials.

**Information sources** Electronic databases Web of Science, PubMed and Scopus.

Main outcome(s) The outcomes of this systematic review primarily focus on assessing the impact of interventions on change of direction (COD) and agility in youth soccer players. These outcomes will be determined based on descriptive results reported by each article, comparing small-sided game (SSG) interventions against comparative groups.

Quality assessment / Risk of bias analysis The methodological quality of the included studies was evaluated using the Physiotherapy Evidence Database (PEDro) scale (Maher et al., 2003), studies with scores of 6 or above are considered to be of high quality, while those scoring below 6 may have methodological limitations. Two independent reviewers, NI and MI, conducted quality assessments of the included studies. Any disagreements between the reviewers were

resolved through a consensus meeting or, if necessary, by a third assessor, VP, providing a rating. Only studies with PEDro scores of 6 or higher were considered for the systematic review (Maher et al., 2003).

**Strategy of data synthesis** Characteristics of Included Studies and Outcomes Extracted:

Author and year of publication

Groups and number of participants

Mean age (years)

Level of play

Sex of participants

Study design

Significant differences at baseline

Tests used for assessment

Outcome measures extracted

Characteristics of SSG-Intervention Programs:

Combined intervention details

Duration of intervention (weeks)

Frequency of sessions per week

Total number of sessions

SSG formats used

SSG pitch dimensions (length × width)

Any other specific conditions or instructions

Sets and repetitions

Work duration

Duration of rest between repetitions

Type of recovery employed

Characteristics of Other Training Programs:

Summary of intervention details for programs other than SSG

Summary of Included Studies and Results of COD and Agility performance

Data extraction was conducted by the first author (NI), and the accuracy of the collected data was subsequently verified by two authors (MI and VP).

Subgroup analysis None.

Sensitivity analysis None.

Language restriction English.

Country(ies) involved Romania.

**Keywords** soccer; football; youth; agility; change of direction; small-sided games.

### **Contributions of each author**

Author 1 - Ioan Neag - Lead the project, including conducting the data search, screening process, data extraction, and quality assessment. Also, responsible for writing and revising the original manuscript.

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Author 2 - Ion Mihăilă - Run the data search, screening process, data extraction, and quality

assessment. Also, responsible for writing and revising the original manuscript.

Author 3 - Vladimir Potop - Run the data search, screening process, data extraction, and quality assessment. Also, responsible for writing and revising the original manuscript.

Author 4 - Ilie Mihai - Responsible for writing and revising the original manuscript.

Author 5 - Gabriel Trandafirescu - Responsible for writing and revising the original manuscript.