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**Review Article**

# Technical Engagement in Small-Sided Games: Effects of Task Constraints in Football — A Systematic Review

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**Abstract**

**Introduction.** In football training, small-sided games (SSGs) are frequently used as an integrated approach to simultaneously develop the technical, tactical, physical, and cognitive dimensions of performance. However, the extent to which specific task constraints influence technical engagement remains inconsistently synthesized.

**Objectives.** This systematic review aimed to examine how different SSG task constraints affect technical engagement in football players within an integrated training framework.

**Materials and Methods.** A systematic search of electronic databases was conducted following established review guidelines. A total of 35 studies investigating the effects of SSG format, pitch size, rule modifications, age, biological maturity, and integrated effects on technical engagement were included. Methodological quality was assessed, and the findings were synthesized according to thematic categories.

**Results.** The findings indicated that smaller formats and reduced team sizes increased technical involvement, while pitch dimensions and scoring rules modulated passing patterns, shooting frequency, and ball possession. Touch limitations accelerated ball circulation but often increased technical errors, particularly in younger players. Age, technical level, and biological maturity significantly influenced technical efficiency. Mental fatigue and inadequate recovery were consistently associated with reduced passing accuracy, poorer ball control, and increased errors.

**Discussions.** These findings are consistent with prior research highlighting the role of task constraints in shaping performance. The evidence supported the view that technical engagement in SSGs emerges from the dynamic interplay of structural, developmental, and psychophysiological factors.

**Conclusions.** SSGs constitute an effective integrated training modality for enhancing technical engagement, provided that task design is developmentally aligned and contextually structured.

**Keywords:** small-sided games, technical engagement, integrated training, task constraints, football.

## Introduction

Football is a dynamic and complex team sport in which performance emerges from the continuous interaction between technical execution, tactical organization, and physiological demands (Little & Williams, 2006; Parlebas, 2020). Given the complexity of football, traditional training methods initially targeted physical, technical, and tactical components separately, often emphasizing ball-free exercises to develop aerobic and anaerobic capacities (Helgerud et al., 2001; Radziminski et al., 2013). Although effective for physiological development, this approach was time-intensive and insufficient for enhancing context-specific technical and tactical skills (Michailidis, 2013). Considering that technical and tactical proficiency are decisive for offensive performance and competitive success (Francesco et al., 2015, 2016), the multidimensional demands of modern football have led to the emergence of integrated training, which simultaneously develops physical capacities alongside technical and tactical competencies.

Integrated training is considered effective approach for player development, as performance improvements are maximized when training conditions mirror the demands of competition (Clemente, 2016). Within this framework, small-sided games (SSGs) enable coaches to concurrently stimulate technical and tactical skills, while enhancing physiological capacities (Chootsungnoen et al., 2025b; Muhyi et al., 2025; Owen et al., 2011). A key pedagogical advantage of SSGs lies in their capacity to promote "repetition without repetition," meaning that players are repeatedly exposed to representative task conditions that enhance perception–action coupling without relying on mechanical and decontextualized technical drills typical of analytical training approaches (Tan et al., 2012).

SSGs are now widely integrated into training programs and can be adapted according to coaching objectives by manipulating rules, player numbers, pitch dimensions, and other contextual variables to regulate task intensity and learning focus (Hill-Haas et al., 2011; Michailidis, 2013). However, modifications in task constraints are expected to produce different effects on players' technical engagement and therefore require careful design and control. Although their impact on physiological responses (Aguiar et al., 2012; Clemente et al., 2014; Hill-Haas et al., 2011), tactical engagement (Essafi et al., 2026; Ometto et al., 2018), and multidimensional outcomes (Bujalance-Moreno et al., 2019; Sarmento, Clemente, Harper, et al., 2018) has been widely reviewed, further clarification is needed regarding how coaches can deliberately manipulate these constraints to enhance technical engagement. Technical engagement refers to the degree of involvement of a player in technical actions within the game, reflecting the frequency, diversity, and contextual relevance of technical behaviors. Variability in findings across similar task manipulations reinforces the need for a clearer synthesis of evidence.

The specific effects of SSG task manipulations on technical engagement indicators remain insufficiently systematized despite the expanding body of literature. The use of SSGs for developing technical skills has been previously examined; however, a structured synthesis of objective indicators of technical engagement across different task constraints is still lacking (Clemente & Sarmento, 2020; Francesco Sgrò et al., 2018). A clearer and more structured understanding of how task design shapes players' technical involvement would provide practitioners with more precise guidance for optimizing integrated football training.

The purpose of this systematic review is to explore how different small-sided game (SSG) task constraints—such as game format, pitch size, rule modifications, and contextual factors—affect technical engagement in football players. By synthesizing outcomes across task designs, it seeks to clarify how SSG configurations influence technical engagement and to provide a more structured and practice-oriented framework for optimizing integrated training in football.

## Materials and Methods

### *Study design and eligibility criteria*

The present systematic review was conducted in strict accordance with the PRISMA guidelines, which provide a standardized framework to ensure transparency, methodological rigor, and reproducibility throughout the processes of study identification, selection, and evidence synthesis (Moher et al., 2010; Page, M. J., McKenzie, J. E., Bossuyt, P. M., et al., 2021; Page, M. J., Moher, D., Bossuyt, P. M., et al., 2021).

Study eligibility was determined through the PICO framework (Population, Intervention, Comparator, Outcomes). The population included football players of any age category, gender, and competitive level. The intervention consisted of training interventions based on small-sided games (SSGs) implemented within an integrated training approach. Comparators involved different manipulations of SSG task constraints. The outcomes of interest focused on indicators of technical engagement.

Studies were included if they: (a) focused solely on football; (b) were published in English; (c) consisted of peer-reviewed articles available in full-text format; (d) were carried out in competitive or performance-oriented contexts; (e) implemented SSG-based training interventions; and (f) reported quantifiable technical performance outcomes. Studies were excluded when they: (a) were conducted in purely educational or recreational settings; (b) were not available in English; (c) did not assess technical performance variables; (d) examined only physical or physiological outcomes without reporting technical indicators; (e) lacked an empirical scientific design (e.g., opinion papers or descriptive reports); (f) did not present original data; or (g) were systematic reviews or meta-analyses.

### *Search strategy*

A systematic search was conducted across three electronic databases—Scopus, PubMed, and Web of Science—and was limited to studies published between 2015 and 2025, in order to capture recent advances in methodological practices, analytical techniques, and training models relevant to SSG research. Search strategies were tailored to each database and constructed using combinations of keywords and Boolean operators. The core search string included terms related to small-sided games, football, integrated training, task constraints, and technical engagement, as follows: ("soccer" OR "football") AND ("small-sided games" OR "SSG") AND ("integrated training") AND ("task constraints" OR "task manipulation") AND ("technical performance" OR "technical engagement" OR "technical actions" OR "technical skills").

All retrieved records were imported into Zotero reference management software for systematic organization and deduplication. The screening process adhered to PRISMA guidelines. Following duplicate removal, titles and abstracts were independently evaluated by two reviewers to eliminate studies failing to satisfy the predefined eligibility criteria. Articles deemed potentially eligible were subsequently assessed in full text to confirm their inclusion. Disagreements between reviewers were addressed through deliberation until a consensus was reached.

Figure 1 presents the PRISMA flow diagram summarizing the entire selection process, from initial record identification through screening and exclusion to final study inclusion.

### *Methodological quality*

To evaluate the methodological quality and risk of bias of the retained studies, a validated 16-item checklist tailored

specifically to Small-Sided Games (SSG) research was applied (Sarmento, Clemente, Araújo, et al., 2018; Sarmento, Clemente, Harper, et al., 2018). This instrument enables a structured appraisal of both methodological rigor and reporting transparency across the selected articles. The checklist covers several key domains: study purpose stated clearly (item 1), relevance of background literature (item 2), appropriateness of the study design (item 3), sample included (items 4 and 5), informed consent procedure (item 6), outcome measures (item 7 and 8), method description (item 9), significance of results (item 10), analysis (item 11), practical importance (item 12), description of drop-outs (item 13), conclusions (item 14), practical implications (item 15), and limitations (item 16).

Items were scored on a binary scale (0 = not fulfilled; 1 = fulfilled), with a "not applicable" (NA) option reserved for informed consent and dropout-related criteria when irrelevant to the study design. A composite quality score was then calculated as the proportion of fulfilled criteria relative to applicable items. On this basis, studies were subsequently classified into three quality tiers: low quality (≤50%), good quality (51–75%), or excellent quality (>75%).

### *Data Extraction*

Data extraction was carried out using a standardized form to maintain consistency across studies. For each article, general characteristics were recorded (author, year, sample size, participants' age, and competitive level). In addition, key methodological and intervention details were collected, including study objectives, SSG format, pitch dimensions, work duration, applied rules, technical variables analyzed, and main findings.

## Results

### *Study Identification and Selection*

The initial database search yielded 442 records. All references were imported into Zotero, where 98 duplicates were automatically identified and removed. The remaining studies then underwent title and abstract screening, resulting in the exclusion of 211 articles deemed inconsistent with the overarching objectives of the review. A total of 98 full-text papers were subsequently excluded after detailed assessment against the predefined inclusion criteria. A total of 35 studies ultimately met all eligibility requirements and were retained for final synthesis. These studies comprised a total sample of 1,088 participants and examined technical engagement outcomes under different Small-Sided Game formats within an integrated training context. The PRISMA flow diagram (Figure 1) provides a comprehensive visual summary of the identification, screening, and inclusion stages.

### *Data Synthesis*

Technical engagement within SSG-based integrated training contexts was predominantly explored through task constraint manipulation. The findings derived from the selected studies were subsequently organized into thematic categories to ensure a clear and coherent synthesis.

Specifically, results were structured according to: (1) the effects of different SSG formats (n = 10); (2) the impact

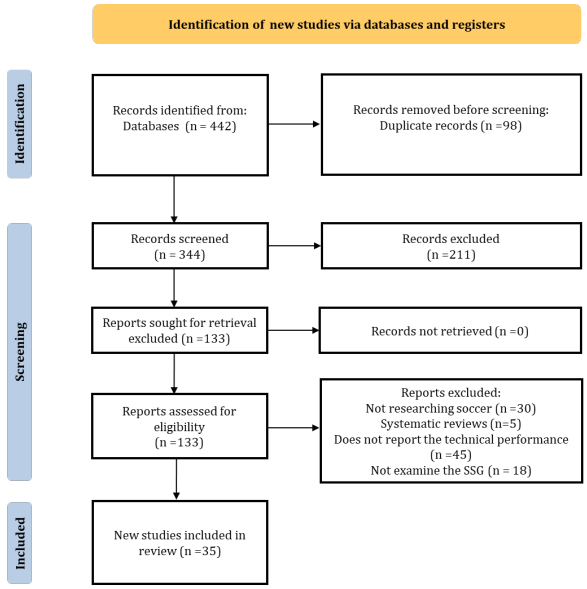


**Fig. 1.** PRISMA flow diagram summarizing the screening and selection process

of pitch size and spatial configurations (n = 8); (3) the influence of specific task-rule modifications (n = 7); (4) effects associated with players' age, biological maturity and technical level (n = 5); and (5) integrated effects arising from the manipulation of other constraints. (n = 5).

This categorization allowed for a systematic examination of how task constraints shape technical outcomes in football SSGs.

### *Methodological Quality*

Methodological quality was evaluated using a checklist specifically designed for SSG research (Sarmento, Clemente, Araújo, et al., 2018). Overall, the studies exhibited a high level of methodological rigor, with all being rated within the "excellent" quality category. Nevertheless, none reached a perfect score of 100%, and the lowest observed score was 75%. The most frequently identified limitations concerned insufficient reporting of study constraints and a lack of clear justification for sample size calculations. Despite the generally strong methodological quality, improving transparency in these areas would enhance the robustness of future research in this field.

## Discussion

This systematic review sought to determine how different Small-Sided Game (SSG) task constraints influence technical engagement in football players within the context of integrated training. Unlike prior reviews that frequently examined technical actions in isolation, this study adopts an integrated approach by focusing on technical engagement across multiple task constraints, including pitch size, player numbers, rules, and contextual factors. The synthesis of the included studies demonstrates that variations in SSG formats consistently produce distinct changes in technical engagement, supported by a growing body of research and

**Table 1.** Technical engagement across different game formats

| Author / year | Sample | Objective | SSGs format | Pitch size (m) | Work | Rules | Analyzed variables | Results |
|---|---|---|---|---|---|---|---|---|
| (Oh & Joo, 2018) | 27 players, U12 "Age not specified" | Assess the effect of format variations on technical engagement | 8 v. 8<br>11 v. 11 | 62 x 51 (198 $m^2$)<br>80 x 54 (196 $m^2$) | 1 x 25' | At kick-off, no shoot directly was allowed; at goal kick, the ball could not be passed over the halfway line; and GKs were not permitted to kick the ball into the opposing half. | Passes<br>Ball contacts<br>Passes in attacking area<br>Forward passes<br>build-up passing<br>Passing in the final third<br>One touch passes<br>Dribbles<br>Shot, mid-, and long-distance passes<br>Crosses<br>Cutbacks<br>Shooting actions<br>goals scored<br>Duels | The smaller game format was associated with a notable rise in the frequency of ball contacts, total passes, zone-specific passing actions and their corresponding success rates, short- and mid-range passes, attempts on goal, shots within the penalty area, and successful dribbling actions. |
| (Torrents et al., 2016) | 44 players, 23.1 ± 0.7 y.o (Amateur; n = 22) and 25.6 ± 4.9 y.o (Pro; n = 22) | Investigate the effects of format modifications on technical engagement | 4 v. 3 + G.K<br>4 v. 5 + G.K<br>4 v. 7 + G.K | 40 x 30 (171 $m^2$,133 $m^2$, 109 $m^2$) | 1 x 3' | Regular rules were applied. The score was reset to zero whenever a two-goal margin was reached by either team. | Withdraw<br>Pass<br>Anticipate<br>Drive<br>Run to the ball<br>Control<br>Delay<br>Dribble<br>Support<br>Clear<br>Press<br>Wait<br>Feint<br>Balance<br>Shoot<br>Unmark<br>Deflect<br>Protect<br>Dissuade<br>Intercept | A higher number of opponents was linked to a higher occurrence of defensive actions (notably ball control) and a reduction in waiting behaviors. As the number of opponents increased, players in possession performed fewer passes and less driving actions. |

**Table 1** (continued)

| Author / year | Sample | Objective | SSGs format | Pitch size (m) | Work | Rules | Analyzed variables | Results |
|---|---|---|---|---|---|---|---|---|
| (Sanchez-Sanchez et al., 2017) | 22 players, 17.2 ± 0.9 y.o | To examine how the use of internal and external floaters affects players' technical engagement. | 4 v. 4<br>4 v. 4 + 2<br>4 v. 4 + 2 + 2<br>4 v. 4 + G.K<br>4 v. 4 +2+ G.K<br>4v.4+2+2+G.K | 40 x 30 (150 $m^2$; 120 $m^2$;120 $m^2$) | 4 x 4'/2' | Each SSG involved four neutral players (two internal, two external), providing possession support from both within and outside the playing area, with no offside rule enforced. | Game pause<br>Dribbling<br>Pass<br>Collective success | Compared to formats involving neutral players, 4v4 SSGs (both with and without the inclusion of a goalkeeper) showed a higher number of dribbling actions. Moreover, collective success was significantly greater in 4v4 SSGs without a goalkeeper (both with and without neutral players) than in formats including a goalkeeper. |
| (Bergmann et al., 2022) | 85 players,<br>U7 (n = 42)<br>U9 (n = 43) | Compare technical actions across different game formats | 5 v. 5 + G.K<br>7 v. 7 + G.K<br>3 v. 3 | 28 x 20 (56 $m^2$)<br>45 x 35 (125.5 $m^2$) | 4 x 5'<br>1 x 20' | 3v.3 on mini-goals (no GK) 5v.5 on 1.65 × 5 m goals (with GK) 7v7: regular rules | Total actions, passes, dribbles, goals, and duels | In under-7, 3v3 increased all technical actions compared with 7v7.<br>In under-9, 5v5 increased most technical actions, while 7v7 increased unsuccessful 1v1 situations.<br>Smaller formats increased total technical actions compared with 7v7 in both age groups. |
| (Clemente et al., 2018) | 12 players<br>7.6 ± 0.5 y.o | Analyse variations in individual technical actions and their variability between SSG formats | 3 v. 3<br>6 v. 6 | 20 x 15 (50 $m^2$)<br>30 x 22 (55 $m^2$) | 3 x 3'/2' | regular rules with small goal (2 × 1 m) | Ball recoveries<br>Ball losses<br>Balls received<br>Attacking balls<br>Neutral balls<br>Successful shots<br>Unsuccessful shots | The 3v3 format substantially increased the individual frequency of technical actions—including ball receptions, recoveries, neutral possessions, turnovers, and unsuccessful shots—compared to the 6v6 condition. |
| (Alcântara et al., 2021) | 11 players<br>13.0 ± 0.8 y.o | Assess the effect of variations in player number on technical engagement. | 3 v. 3 + GK<br>5 v. 5 + GK | 37 x 24 (148 $m^2$)<br>48 x 31 (148.8 $m^2$) | (4 or 2 or 1) x (5 or 10 or 20) / (150 to 300 s) | Influence of the Regimen; Goalkeepers | Successful passes<br>Ball involvement<br>Balls contact<br>Unsuccessful passes<br>Shots on target<br>Unsuccessful shots<br>Goals scored | Compared to 5v5, the 3v3 format generated more successful passes, ball involvement, ball contacts, shots on target and goals. |



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**Table 1** (continued)

| Author / year | Sample | Objective | SSGs format | Pitch size (m) | Work | Rules | Analyzed variables | Results |
|---|---|---|---|---|---|---|---|---|
| (Wang et al., 2024) | 24 players<br>16.6 ± 0.5 y.o | Compare technical performance between 2v2 and 4v4 and examine association with aerobic capacity (YYIRT) | 2 v. 2<br>4 v. 4 | 25 x 15 (94 $m^2$)<br>35 x 17 (92 $m^2$) | 4 x 2'/ 2'<br>4 x 4'/ 2' | No offside<br>small goal | Lost ball<br>Successful passes<br>Unsuccessful passes | 2v2 increased successful passes, unsuccessful passes, and ball losses compared with 4v4.<br>YYIRT was positively correlated with unsuccessful passes and ball losses in 2v2. |
| (Yılmaz & Soylu, 2024) | 24 players<br>21.0 ± 1.5 y.o | Evaluate the influence of SSG formats on technical responses | 2 v. 2<br>2 v. 2 +GK<br>4 v. 4<br>4 v. 4 +GK | 27 × 15 (101$m^2$)<br>27 × 15 (101$m^2$)<br>32 × 25 (100$m^2$)<br>32 × 25 (100$m^2$) | 4 x 2'/ 2'<br>4 x 4'/ 2' | Scoring method: Goalkeeper; Small goals; Ball possession | Ball losses<br>Successful passes<br>Unsuccessful passes<br>Interceptions | Possession games increased successful passes in both 2v2 and 4v4 compared with mini-goal and goalkeeper formats.<br>In 2v2, possession games also increased interceptions compared with mini-goal and goalkeeper formats. |
| (Clemente et al., 2019) | 16 players<br>10.1± 0.3 y.o | Compare technical action variability and differences between formats | 3 v. 3<br>6 v. 6 | 15 x 20 (50 $m^2$)<br>30 x 22 (55 $m^2$) | 3 x 3' /2'<br>3 x 6' /2' | Standard SSG rules | Shots (S)<br>Attacking balls/passes (AB)<br>Received balls (RB) Conquered balls (CB)<br>Lost balls (LB) | 3v3 largely increased, conquered balls, lost balls, received balls and shots compared with 6v6.<br>6v6 showed very large decreases in technical actions per minute compared with 3v3. |
| (Chootsungnoen et al., 2025a) | 20 players<br>21.4 ± 1.82 y.o | Examine the effects of floater number on technical engagement | 4 v. 4<br>4 v. 4 + 1<br>4 v. 4 + 2 | 32 x 25 (100 $m^2$) | 4 x 4'/4' | Addition of 1 or 2 neutral floaters | Interceptions<br>Total passes<br>Successful passes<br>Dribbling | 4v4+2 increased total and successful passes compared with 4v4.<br>4v4+1 showed intermediate technical responses.<br>However, no clear differences were observed in dribbling and interceptions across all small-sided game groups. |

**Table 2.** Technical engagement across spatial configurations and pitch sizes

| Author / year | Sample | Objective | SSGs format | Pitch size (m) | Work | Rules | Analyzed variables | Results |
|---|---|---|---|---|---|---|---|---|
| (Coutinho et al., 2020) | 10 players, 13.7 ± 0.5 y.o | To examine how different pitch boundary markings affect technical engagement in SSGs. | 5 v. 5 + G.K | 30 x 25 (75 $m^2$) | 3 x 6'/ 3' | Three distinct types of external pitch markings were employed: (1) fully continuous lines, (2) dashed lines and (3) markings limited to the corners only | Goals<br>Dribbles<br>Passes<br>Shots on target | In comparison with corner-only markers, the presence of pitch lines was linked to an increase in offensive technical actions, while simultaneously resulting in a lower frequency of passes. |
| (Folgado et al., 2019) | 20 players, 14.1 ± 0.5 y.o | To evaluate how manipulating pitch length and width affects technical engagement in SSGs. | 4 v. 4 + G.K | 40 x 30 (150 $m^2$)<br>30 x 40 (150 $m^2$) | 3 x 6'/ 3' | The offside rule was not enforced. | Passes<br>Dribbles<br>Lost balls<br>Goals<br>Shoots | The 30 x 40 m pitch configuration was linked to a higher individual shooting frequency, whereas the 40 x 30 m format yielded an elevated frequency of completed passes per player. |
| (Olthof et al., 2018) | 148 players, 12.5 ± 0.5 y.o (n = 36), 14.4 ± 0.5 y.o (n = 43), 16.6 ± 3.2 y.o (n = 28), 17.9 ± 1.0 y.o (n = 43) | To examine how alterations in pitch size affect players' technical engagement in SSGs. | 4 v. 4 + G.K<br>4 v. 4 + G.K | 40 x 30 (120 $m^2$)<br>68 x 47 (320 $m^2$) | 1 x 4' | In the smaller pitch dimension, the offside rule was not enforced. | Goals/shots<br>Set pieces<br>Transitions<br>Ball possessions | The larger pitch was associated with longer ball possession phases and a reduced number of transitions. |
| (Jara et al., 2018) | 13 players, 16.6 ± 0.9 y.o | To examine how alterations in pitch size affect goalkeeper-specific technical engagement in SSGs. | 5 v. 5 + G.K | 32 x 23 (74 $m^2$)<br>50 x 35 (175 $m^2$)<br>62 x 44 (273 $m^2$) | 3 x 8'/5' | No corners were awarded. | Goal kick<br>Control with the foot<br>Fly<br>Direct and indirect free kick<br>Clear-out<br>1-on-1<br>Open palm technique<br>Pass by hand and foot<br>Screen<br>Deflection<br>Clear-out by the defence<br>Parry<br>Save | The frequencies of duels and blocks were increased on the larger pitch, In contrast, the smaller pitch was associated with an increased number of passes executed using both the hands and the feet. |



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**Table 2** (continued)

| Author / year | Sample | Objective | SSGs format | Pitch size (m) | Work | Rules | Analyzed variables | Results |
|---|---|---|---|---|---|---|---|---|
| (Martone et al., 2017) | 33 players, 10.0 ± 0.5 y.o (n = 17), 13.2 ± 0.3 y.o (n = 16) | To examine how differences in relative playing space allocated per player affect technical engagement in SSGs. | 3 v. 3<br>3 v. 3<br>4 v. 4<br>4 v. 4<br>5 v. 5<br>5 v. 5 | 20 x 20 (67 $m^2$)<br>30 x 30 (150 $m^2$)<br>20 x 20 (50 $m^2$)<br>30 x 30 (113 $m^2$)<br>20 x 20 (40 $m^2$)<br>30 x 30 (90 $m^2$) | 3 x 4'/3' | No goalkeeper was included; goals were considered valid exclusively when all members of the attacking team had advanced into the opponent's half of the pitch. | Ball involvements<br>Dribbles<br>Passing actions<br>Target passes<br>Headers<br>Defensive tackles<br>Shots on goal<br>Crosses | Older players performed more dribbles, crosses, and tackles when relative space was smaller. In larger relative space, higher overall involvement with the ball was observed. Younger players showed a more variable (scattered) pattern of technical actions across space conditions. |
| (Joo et al., 2016) | 32 players, 12.0 ± 0.4 y.o | Examine how variations in pitch dimensions influence technical engagement. | 7 v. 7 + G.K<br>7 v. 7 + G.K<br>11 v. 11 | 68 x 47 (228 $m^2$)<br>75 x 47 (252 $m^2$)<br>75 x 47 (176 $m^2$) | 1 x 30' | Regular rules | All passes<br>Continuous passes<br>Side passes<br>Forward passes<br>Back passes<br>Short; Mid and Long-distance passes<br>Blocked balls | The 7v7+GK format on the larger pitch produced a significant increase in total passes and forward passes. |
| (Nunes et al., 2021) | 52 players,<br>U11: (n = 16), age: 10.0 ± 0.7 y.o,<br>U15: (n = 18), age: 14.0 ± 1.3 y.o<br>U23: (n = 18), age:21 ± 1.60 y.o | Investigate effects of playing area size on technical responses | 4 v. 4 | 20 x 15 (37.5$m^2$)<br>25 x 20 (62.5 $m^2$)<br>30 x 25 (93.75 $m^2$) | 4 x 4'/4' | The format excluded both goalkeepers and any type of goal or target structure. | Maximum passing speed<br>Dominant foot passes, and non-dominant foot passes. | No overall significant differences in technical actions. U11 performed more passes in larger areas, while U23 performed more passes in smaller areas. Minimal effects observed in U15. |
| (Qiao et al., 2025) | 36 players 16.5 ± 0.5 y.o | To examine how pitch size and scoring method interact to affect technical engagement in SSGs. | 3 v. 3 | 18.4 x 24.5 (75 $m^2$)<br>21.2 x 28.3 (100$m^2$)<br>23.3 x 31.0 (120$m^2$) | 3 x 4'/2' | Two formats: ball possession vs small goals | Passes<br>Receptions<br>dribbles<br>shots | Larger pitches promoted greater passing success. Small-goal formats and smaller pitches encouraged more frequent dribbling but reduced passing success and overall technical variety. Higher physiological intensity was moderately associated with decreased shooting effectiveness. |

**Table 3.** Technical Engagement across different task-rule modifications

| Author / year | Sample | Objective | SSGs format | Pitch size (m) | Work | Rules | Analyzed variables | Results |
|---|---|---|---|---|---|---|---|---|
| (Machado, Ribeiro, et al., 2019) | 20 players, 13.5 ± 1.2 y.o (n = 10), 16.3 ± 0.5 y.o (n = 10) | Assess how rule changes and variations in game configurations influence technical engagement. | 3 v. 3 + G.K<br>4 v. 4 + G.K | 36 x 27 (162 $m^2$)<br>47.72 x 29.54 (176 $m^2$) | 1 x 10' | Six SSG formats were used: three progression-to-target games and three ball possession games. | Ball touches<br>Ball possessions<br>Passes<br>Players involved<br>Shots | In youth players, reduced SSG formats made ball retention more challenging. The 3v3 condition improved offensive effectiveness in progression-based games, while possession-maintenance tasks resulted in extended passing sequences and higher player involvement. |
| (Rago et al., 2018) | 8 players, 20.1 ± 1.0 y.o (Amateurs) | Evaluate how different playing surfaces (sand versus artificial turf) influence technical engagement. | 4 v. 4 + GK | 37 x 28 m (130 $m^2$) | 3 x 6'/3' | No offside rule | Goals<br>Dribbling<br>Passes or crosses<br>Tackles<br>Shots<br>Headers<br>Involvements with the ball<br>Chest trap | In comparison with sand, a higher number of successful actions was recorded on artificial turf. Conversely, actions involving lifting the ball occurred more frequently on sand than on artificial turf. |
| (Batista et al., 2019) | 16 players, 23.9 ± 5.4 y.o (semi-pro) | Assess how coach instructions influence technical engagement. | 7 v. 7 + G.K | 62 x 50 (221 $m^2$) | 1 x 5' | Standard rules were applied. Teams were either given no tactical instructions or specific guidance related to defensive and offensive strategies. | Ball recoveries<br>Number of passes per ball possession | Defensive instructions led to more ball recoveries and reduced space occupation, whereas offensive instructions, relative to the no-instruction control condition, produced more passes and greater spatial coverage. |
| (Pulling et al., 2016) | 8 players, 12.1 ± 0.5 y.o | To assess how different scoring formats (2-goal, 4-goal, 2-goal with goalposts, and 4-goal with one infield corner goal) affect technical engagement in SSGs. | 4 v. 4 | 45.72 x 36.58 (209 $m^2$) | 2 x 5'/3' | The study used four scoring formats: (1) a 2-goal game, (2) a 4-goal game, (3) a 2-goal game with goalposts, and (4) a 4-goal game featuring one infield goal positioned at each corner. Throw-ins were not permitted during play. | Goal<br>Shot<br>Dribbling<br>Turning<br>1 vs. 1 (duels)<br>One-two<br>Overlap<br>Penetrating pass<br>Successful pass<br>Pass forwards<br>Pass backwards<br>Pass sideways<br>Unsuccessful pass | The 2-goal condition generated more successful penetrating, forward and backward passes, while the 4-goal format produced more sideways passes and turns. Shots and goals were most frequent in the 4-goal game with one corner-positioned infield goal. |



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**Table 3** (continued)

| Author / year | Sample | Objective | SSGs format | Pitch size (m) | Work | Rules | Analyzed variables | Results |
|---|---|---|---|---|---|---|---|---|
| (Castellano et al., 2016) | 24 players, 19.1 ± 1.2 y.o | Evaluate how different scoring formats (small goals, presence of goalkeepers, and use of floaters) influence technical engagement. | 7 v. 7 + G.K<br>7 v. 7<br>7 v. 7 + G.K + 2 (outside neutral players) | 40 x 25 (71 $m^2$) | 1 x 6' | No offside rule<br>The 7 vs. 7 format without a goalkeeper was played using small goals. | Offensive sequences (Duration) total possession percentage | Game formats integrating small goals and neutral players were associated with prolonged ball possession sequences relative to the format employing solely a goalkeeper. |
| (Soylu et al., 2024) | 20 players, 17.3 ± 1.4 y.o | To examine how coach encouragement (CE) affects players' technical performance in SSGs. | 2 v. 2<br>3 v. 3<br>4 v. 4 | 15 x 27 (100 $m^2$)<br>20 x 30 (100 $m^2$)<br>25 x 32 (100 $m^2$) | 4 x 2'/ 2'<br>4 x 3'/ 2'<br>4 x 4'/ 2' | Two conditions: with coach encouragement (CE+) vs without encouragement (CE−) | Successful passes, successful shots | CE+ increased successful passes and shots compared to CE− (moderate to very large effects). CE− showed lower technical performance. |
| (Rosten et al., 2025) | 12 players, 17.9 ± 0.8 y.o | To investigate how different touch restrictions influence ball-touch temporal intervals and technical engagement | 4 v. 4 + GK | 20 x 30 (75$m^2$) | 3 x 4'/4' | Three conditions: max 2 touches; max 3 touches; free play (no touch restriction) | Temporal interval between 1st and 2nd touch, total passes, receptions | Touch restrictions generated more passes than unrestricted conditions, while unrestricted play produced more receptions. Across all touch rule conditions, the shortest interval between first and second touches was observed in the offensive zone. |

**Table 4.** Technical engagement across age, technical level, and biological maturity

| Author / year | Sample | Objective | SSGs format | Pitch size (m) | Work | Rules | Analyzed variables | Results |
|---|---|---|---|---|---|---|---|---|
| (Machado, Barreira, et al., 2019) | 48 players, 13.1 ± 1.5 y.o (n = 24), 16.9 ± 0.1 y.o (n = 24) | Evaluate how age and tactical skill level influence technical engagement. | 3 v. 3 + 3 + G.K<br>4 v. 4 + G.K | 47.72 x 29.54 (157 $m^2$)<br>47.72 x 29.54 (176 $m^2$) | 1 x 10' | No offside rule was enforced | Ball possession<br>Shooting actions<br>Players involved<br>Passing actions<br>Ball contacts | Players with higher skill levels demonstrated increased offensive activity and effectiveness. |

**Table 4** (continued)

| Author / year | Sample | Objective | SSGs format | Pitch size (m) | Work | Rules | Analyzed variables | Results |
|---|---|---|---|---|---|---|---|---|
| (Rowat et al., 2017) | 27 players, 17.4 ± 0.9 y.o | To assess how physical performance and technical skills combine to influence overall technical engagement in SSGs. | 5 v. 5 | 30 x 25 (75 $m^2$) | 4 x 5'/ 3' | Small goals were used No GK | A technical game scoring system was used to evaluate player performance across ten indicators: first touch, awareness, overall control, aerial control, short and long passing, dribbling, turning, shooting, accuracy, two-footed ability, and attitude. | Dribbling executed in combination with a pass was the strongest indicator of a player's technical level during SSGs. Overall technical performance showed no significant association with physical performance. |
| (Coutinho et al., 2022) | 114 players, U9=20 (7.9± 0.9 y.o) U11= 20 (9.5 ± 0.9 y.o) U13= 21 (11.6± 0.8 y.o) U15= 18 (13.9± 0.6 y.o) U17= 19 (16.2± 0.7 y.o) U19= 16 (17.9± 0.4 y.o) | To assess how limiting the number of ball touches affects performance across different age groups in SSGs. | G.K+ 4 v. 4 +G.K | 40 x 30 (150 $m^2$) | 3 x 4'/2' | Three conditions : free play (FP); max 2 touches (2T); max 1 touch (1T) | Technical variables included successful and unsuccessful passes, successful dribbles, shots on target, and goals scored. | Restricting ball touches (2-touch and 1-touch conditions) led to small-to-moderate improvements in successful passes across U9, U15, and U17 players, while generally also resulting in an increase in unsuccessful actions; younger groups (U9–U13) coped better with 2T than 1T, while older groups showed better adaptation to stricter touch limits. |
| (King et al., 2025) | 53 players 13.4 ± 0.9 y.o | To assess how team size and bio-banding (maturity grouping) affect technical engagement in SSGs. | 4 v. 4<br>5 v. 5<br>6 v. 6 | 40.3 x 28 (141.05 $m^2$)<br>44.1 x 32 (141,12 $m^2$)<br>47 x 36 (141$m^2$) | 72 SSGs total × 5'/5' | No goalkeepers were used. Players were not allowed to score unless they were in the opponent's half. | Touches, releases, possessions, time on the ball. | Technical action frequency declined with increasing team size, while more biologically mature players performed more technical actions in 4v4 than 6v6 formats. Less mature players in mismatched groups showed greater technical variability, especially in 4v4. Overall, smaller formats enhanced technical involvement, particularly under maturity-matched conditions. |
| (Cherni et al., 2025) | 36 players Pre-PHV (n = 12) 14.7±0.4 y.o Circa-PHV (n = 12) 14.4±0.9 y.o Post-PHV (n = 12) 14.2±0.7 y.o | Evaluate how biological maturity status influences technical engagement across different SSG formats. | 3 v. 3<br>4 v. 4 | 36 x 27 (162$m^2$)<br>40 x 29 (193 $m^2$)<br>40 x 30 (150 $m^2$)<br>44 x 33 (181,5$m^2$) | 2 x 4'/1' | Standard SSG rules | Successful passes (%SP), interceptions, duels, ball-loss, ball possession | Pre-PHV: higher interceptions in large SSGs; post-PHV: higher %SP; 4-a-side increased ball-loss and decreased duels/%SP; large pitches increased ball possession and interceptions; regular pitches increased accelerations and decelerations. |



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**Table 5.** Technical engagement across integrated effects

| Author / year | Sample | Objective | SSGs format | Pitch size (m) | Work | Rules | Analyzed variables | Results |
|---|---|---|---|---|---|---|---|---|
| (McLean et al., 2016) | 12 players<br>21 ± 3 y.o | Assess how the duration of recovery between SSG bouts influences technical engagement. | 3 v. 3 | 15 x 20 (50m²) | 6 x 2'/30"<br>6 x 2'/120" | The game format excluded both goals and goalkeepers, and no form of coach encouragement was administered throughout the sessions. | Successful passes<br>Unsuccessful passes<br>Interceptions<br>Ball possession<br>Tackles<br>Balls lost | Only successful tackles increased and team possession time decreased in REC-120; all other technical variables unchanged. Recovery duration had minimal impact on technical execution. |
| (Christopher et al., 2016) | 12 players,<br>15.8 ± 0.6 y.o | To examine how different work-to-rest ratios affect players' technical engagement in SSGs. | 6 v. 6 + G.K | 50 x 32 (133 m²) | 1 x 8'<br>2 x 4'/1'<br>4 x 2'/1' | No offside | Ball Control & Possession:<br>Individual possessions<br>Regains<br>Passes (Successful passes; Unsuccessful passes)<br>Shots (Shots on target; Goals) | In the continuous regimen, players scored significantly fewer goals, while no meaningful differences were observed in the other technical actions. |
| (Badin et al., 2016) | 20 players<br>17.8 ± 1.0 y.o | Evaluate how mental fatigue influences technical engagement during SSGs. | 5 v. 5 | 20 x 30 (60m²) | 2 x 7'/1' | standard SSG rules without GK | Involvements, Possessions, Passes, Control Error, Tackles | Mental fatigue reduced the quality of technical actions, including passing, receptions… |
| (Trecroci et al., 2020) | 9 players<br>17.6 ± 0.5 y.o | To examine how mental fatigue affects technical engagement during SSGs. | 4 v. 4 + 1 | 32 x 40 (160 m²) | 2 x 7'/1' | No offside rule | Passing accuracy, shot accuracy, Control, tackles | Mental fatigue likely reduced passing and shot accuracy, increased control errors and negative passes, and decreased tackle success and ball possession. |
| (Selmi et al., 2021) | 20 players<br>25.1 ± 1.0 y.o | Assess how well-being measures and Total Quality of Recovery shape players' technical engagement. | 5 v. 5 | 35 x 25 (87,5m²) | 4 x 4'/3' | standard rules | Successful pass<br>Lost ball<br>Possession<br>Interception<br>Tackle | Greater fatigue and DOMS levels corresponded to fewer successful interceptions, passes, tackles, and more lost passes. Likewise, lower TQR scores were associated with reduced technical performance. |

diverse participant samples. These results equip coaches with actionable guidance to optimize SSG design and planning targeting specific technical engagement while accounting for players' developmental stages and game contexts.

Most included studies were rated as excellent in methodological quality, which enhances confidence in the validity of the findings reported. Nonetheless, some recurrent limitations were observed, particularly the lack of justification for sample sizes and the limited acknowledgment of study constraints, suggesting that even validated quality assessment tools may not capture all methodological nuances.

For clarity and coherence, the discussion is organized around the main thematic areas that emerged from the reviewed literature, including game format, pitch size, task-rule modifications, age and maturity, and integrated influences on technical engagement.

### *Effects of game format on technical engagement*

Manipulating SSG format, particularly through adjustments in player numbers, clearly modifies the frequency and nature of technical involvement. Across age groups and competitive levels, reduced formats consistently increased individual technical actions per player, suggesting that fewer players per team enhance interaction density, ball exposure, and repetition opportunities.

In youth categories, smaller formats appear especially advantageous for promoting technical engagement. Greater frequencies of ball touches, total and successful passes across pitch zones, shots, and successful dribbles were observed in 8v8 compared with 11v11 among U12 players (Oh & Joo, 2018). Similarly, 3v3 substantially increased total technical actions compared with 7v7 in U7 players, while 5v5 elicited more technical actions than 7v7 in U9 (Bergmann et al., 2022). Increased frequencies of received balls, conquered balls, lost balls, and shots were also reported in 3v3 compared with 6v6 in young players (Clemente et al., 2018), with very large reductions in technical actions per minute observed when shifting from 3v3 to 6v6 (Clemente et al., 2019). Overall, the findings indicate that reduced formats in early developmental stages maximize direct involvement and technical repetitions.

Comparable patterns were identified in adolescent and adult players. Greater successful passes, ball contacts, ball involvement, goals, and shots on target were recorded in 3v3 relative to 5v5 (Alcântara et al., 2021). Highly reduced formats such as 2v2 generated more successful and unsuccessful passes, as well as more ball losses, compared with 4v4, reflecting increased technical demand and risk exposure (Wang et al., 2024). Moreover, possession-based scoring conditions increased successful passes in both 2v2 and 4v4 compared with mini-goal and goalkeeper formats, indicating that scoring structure interacts with player number to shape technical output (Yılmaz & Soylu, 2024).

Conversely, increasing the number of opponents appears to constrain offensive technical expression. A progressive reduction in passes and ball-driving actions, accompanied by an increase in defensive control behaviors, was observed as opposition increased from 4v3 to 4v7 + GK (Torrents et al., 2016). This pattern suggests that greater defensive density restricts available time and space for offensive execution. In symmetrical 4v4 formats, higher dribbling frequency and greater collective success were observed compared with configurations including neutral players or goalkeepers (Sanchez-Sanchez et al., 2017). However, introducing two neutral floaters (4v4+2) increased total and successful passes compared with standard 4v4, while dribbling and interceptions remained unchanged, indicating that numerical superiority facilitates ball circulation rather than individual penetration (Chootsungnoen et al., 2025a).

Overall, reduced formats (e.g., 2v2, 3v3, 4v4) consistently amplify individual technical involvement, whereas larger formats or increased opposition density decrease per-player technical frequency while potentially raising contextual and tactical complexity. The inclusion of floaters or possession-oriented constraints tends to promote passing behaviors, whereas strictly balanced formats without external support stimulate greater individual actions such as dribbling.

From a practical perspective, manipulating game format constitutes a primary methodological lever for targeting specific technical adaptations. Highly reduced formats may be preferable when the objective is to maximize ball contacts, shooting opportunities, and active involvement, whereas slightly expanded formats may better approximate competitive structures and collective organization demands.

### *Effects of spatial configuration and pitch size on technical engagement*

Manipulating spatial constraints—either through pitch dimensions, relative space per player, or external markings—demonstrably alters technical expression in SSGs. However, unlike game format, the effects of spatial configuration appear more context-dependent, varying according to age group, relative area per player, and scoring structure.

Adjustments in pitch shape (length versus width) modify the type of technical skills performed. Increasing pitch width (30 × 40 m) led to more shots per player, whereas increasing pitch length (40 × 30 m) favored a higher number of completed passes per player, indicating that spatial orientation influences offensive tendencies (Folgado et al., 2019). Similarly, larger pitch dimensions promoted longer periods of ball possession and fewer transitions, suggesting greater stability in build-up play (Olthof et al., 2018). In line with these findings, expanding pitch size increased overall and forward passes in 7v7 + GK formats, reinforcing the idea that greater longitudinal space facilitates ball circulation and progression (Joo et al., 2016). Moreover, larger pitches enhanced passing success in 3v3 formats, whereas smaller areas reduced passing effectiveness and technical diversity (Qiao et al., 2025).

Conversely, reduced playing areas appear to stimulate more direct and individual technical behaviors. Smaller pitches increased dribbling frequency and reduced passing success, particularly in small-goal formats (Qiao et al., 2025). In older youth players, smaller relative space per player elicited more dribbles, crosses, and tackles, suggesting that spatial restriction intensifies individual duels and technical confrontation (Martone et al., 2017). Additionally, reduced pitch dimensions were associated with a greater number of passes performed by goalkeepers—both by hand and by foot— indicating greater involvement in ball circulation under spatial compression (Jara et al., 2018).

Nonetheless, the relationship between area size and technical output is not uniform across developmental stages. Larger areas increased passing frequency in U11 players, whereas U23 players performed more passes in smaller areas, and minimal effects were observed in U15, highlighting age-dependent adaptations to spatial constraints (Nunes et al., 2021). Furthermore, modifications in external pitch markings influenced offensive indicators, with complete lines generating more offensive technical actions compared with corner markers, although passing frequency decreased under line conditions (Coutinho et al., 2020).

Collectively, these findings indicate that increasing pitch dimensions tends to promote passing behaviors, ball possession, and structured circulation, whereas reducing space intensifies individual actions such as dribbling, tackling, and goalkeeper involvement. However, the magnitude and direction of these effects depend on relative space per player, age category, and scoring structure. From a practical perspective, spatial manipulation constitutes a refined methodological tool: larger areas may be preferable when the objective is to develop passing networks and positional play, whereas smaller areas may be strategically used to enhance technical confrontation, rapid decision-making, and individual execution under pressure.

### *Effects of task-rule modifications on technical engagement*

Beyond structural constraints such as format and pitch size, specific task-rule manipulations substantially reshape technical expression during SSGs. Modifications related to scoring systems, instructional cues, environmental conditions, encouragement, and touch limitations appear to act as fine-tuning mechanisms that orient players toward particular technical engaement.

Altering the objective of the task (e.g., maintaining possession vs. progressing toward target) influences both offensive efficacy and involvement patterns. Greater offensive effectiveness in progression games was observed in 3v3 configurations, whereas possession-focused conditions generated longer passing sequences and increased player involvement; however, younger players experienced greater difficulty maintaining possession in smaller configurations (Machado, Ribeiro, et al., 2019). These findings indicate that the nature of the task goal directly modulates passing dynamics and shooting frequency.

Scoring structure also exerts a marked effect on technical outputs. Two-goal formats promoted more successful forward, backward, and penetrating passes, while four-goal configurations increased sideways passes and turning actions; additionally, shots and goals were most frequent when a goal was positioned infield at each corner (Pulling et al., 2016). Similarly, incorporating small goals and neutral players extended the duration of offensive sequences and increased overall possession compared with formats using only a goalkeeper (Castellano et al., 2016). These results suggest that diversifying scoring references modifies spatial orientation and passing patterns.

Environmental and contextual manipulations further affect execution quality. A greater number of successful technical actions was achieved on artificial turf compared with sand, whereas actions requiring ball elevation occurred more frequently on sand, reflecting surface-induced technical adaptations (Rago et al., 2018). Instructional interventions also modulate performance: defensive instructions increased ball recoveries and reduced occupied space, whereas offensive instructions increased the number of passes and expanded spatial occupation relative to no-instruction conditions (Batista et al., 2019). In addition, coach encouragement enhanced successful passes and shots compared with non-encouragement conditions, with moderate to very large effects (Soylu et al., 2024).

Finally, imposing touch restrictions modifies interaction tempo and passing behavior. Limiting players to two or three touches increased the total number of passes compared with unrestricted play, whereas free play resulted in more receptions; moreover, the shortest interval between first and second touches consistently occurred in the offensive zone regardless of the rule condition (Rosten et al., 2025). This indicates that constraining ball contact frequency accelerates circulation but may alter individual control opportunities.

Overall, task-rule manipulations operate as targeted pedagogical levers capable of directing technical engagement toward specific outcomes. While possession-oriented rules and touch restrictions tend to stimulate passing frequency and circulation speed, diversified scoring systems and instructional cues modify spatial occupation, offensive penetration, and shooting opportunities. For practitioners, these findings highlight that subtle regulatory adjustments can strategically refine technical demands without altering the broader structural framework of the SSG.

### *Effects of age, technical level, and biological maturation on technical engagement*

Inter-individual differences related to age, technical expertise, and biological maturation appear to substantially mediate technical engagement during SSGs. Rather than acting as simple background characteristics, these developmental factors interact dynamically with task constraints to shape the frequency, quality, and efficiency of technical actions.

Higher technical proficiency is consistently associated with greater offensive involvement and effectiveness. Players with superior skill levels demonstrated increased participation in attacking actions and enhanced execution efficiency across different SSG formats (Machado, Barreira, et al., 2019). Moreover, composite assessments of technical proficiency indicate that dribbling combined with passing actions constitutes a strong discriminator of overall technical level, whereas physical performance shows no significant association with global technical proficiency during SSGs (Rowat et al., 2017). This reinforces the notion that technical expression in constrained games is more closely linked to perceptual–motor expertise than to purely physical capacities.

Chronological age seems to influence players' responses to rule modifications. Specifically, limiting ball contacts through two- and one-touch constraints led to small-to-moderate improvements in passing success across multiple age categories, but also elevated unsuccessful technical actions overall; younger players (U9–U13) adapted more effectively to two-touch conditions than to stricter one-touch constraints, whereas older players demonstrated greater adaptability to more restrictive formats (Coutinho et

al., 2022). These findings suggest that cognitive processing speed, decision-making maturity, and accumulated training experience likely underpin age-related differences in coping with temporal constraints.

Biological maturation further influences technical involvement and efficiency. More mature players executed more technical actions in smaller SSG formats (4v4 compared with 6v6), and technical involvement generally declined as team size increased; additionally, in maturity-mismatched games, less biologically mature players demonstrated a higher degree of variability in their technical actions, particularly in smaller formats (King et al., 2025). Complementary evidence indicates that post-PHV players achieved higher percentages of successful passes, whereas pre-PHV players recorded more interceptions in larger SSGs; 4-a-side formats increased ball losses and reduced duel frequency and passing success, while larger pitches promoted greater ball possession and interception rates (Cherni et al., 2025).

Collectively, these findings indicate that technical engagement in SSGs is not uniformly distributed across developmental stages. Instead, age, expertise, and maturation status systematically modulate how players respond to format size, pitch dimensions, and rule constraints. From an applied perspective, these findings reinforce the pedagogical value of developmentally aligned SSG design—such as bio-banding, adapted touch limitations, and format selection—to optimize technical engagement while accounting for individual growth trajectories.

### *Integrated effects on technical engagement*

Technical engagement in SSGs emerges from the interaction between task design and players' physiological and psychological states. Manipulations related to recovery duration, work-to-rest ratio, mental fatigue, and well-being indices demonstrate differentiated effects on execution quality.

Altering recovery time between bouts appears to have limited influence on most technical variables. Extending recovery increased successful tackles and reduced team possession time, while other indicators remained stable, suggesting a minimal overall impact of acute recovery manipulation (McLean et al., 2016). Likewise, different work-to-rest configurations produced few changes in technical skills, except for fewer goals during continuous play, indicating that scoring efficiency may be more sensitive to accumulated fatigue than passing or possession metrics (Christopher et al., 2016).

In contrast, mental fatigue consistently impairs technical precision. Reduced passing and shooting accuracy, increased control errors, and lower tackle success were observed under cognitively fatigued conditions (Badin et al., 2016; Trecroci et al., 2020). Similarly, higher perceived fatigue, greater muscle soreness, and lower recovery quality were associated with fewer successful technical actions and more ball losses (Selmi et al., 2021).

Collectively, these integrated findings suggest that while structural manipulations such as recovery intervals or bout configuration may exert modest effects on technical indicators, psychophysiological state—particularly mental fatigue and perceived recovery—represents a more decisive determinant of technical accuracy and efficiency. From an applied perspective, optimizing recovery strategies and monitoring well-being indices may therefore be essential to preserve technical quality during SSG-based training interventions.

### *Limitations, practical implications, and future research directions*

Several limitations must be considered. Marked heterogeneity existed across studies regarding SSG formats, pitch dimensions, rule constraints, workload structures, and technical performance indicators, limiting direct comparability. Sample sizes were often modest and restricted to specific age categories or competitive levels, which may reduce external validity. In addition, the operational definitions of technical engagement varied considerably across investigations. Restricting the search to English-language publications may have introduced language bias, potentially excluding relevant studies published in other languages. Contextual variables such as prior training load and seasonal timing were not consistently controlled and may have influenced technical outcomes.

Technical engagement in SSGs, as a core component of integrated training, is strongly modulated by task constraints. Smaller formats and reduced team sizes generally increase technical involvement, while pitch configuration and scoring rules shape passing dynamics and shooting behavior. Touch limitations can accelerate ball circulation but may elevate error rates, particularly in younger players. Furthermore, mental fatigue and inadequate recovery negatively affect technical precision, highlighting the need to monitor cognitive load and well-being during training. Coaches should therefore structure SSGs coherently within an integrated training framework, aligning task design with players' developmental stage, technical level, and targeted performance objectives.

Future studies should seek greater standardization of technical performance metrics to improve comparability. Larger and more diverse samples, including female players and multiple competitive standards, would enhance generalizability. Longitudinal research is needed to determine the long-term impact of specific SSG manipulations on technical engagement. Additionally, integrating perceptual–cognitive assessments and objective fatigue measures may clarify the mechanisms underpinning technical adaptation within constrained game environments.

## Conclusion

This systematic review aimed to investigate how different Small-Sided Game (SSG) task constraints influence technical engagement in football players within the framework of integrated training. The findings indicate that technical expression is not an isolated outcome, but rather emerges from the dynamic interaction between structural constraints (e.g., format, pitch size, rules), individual characteristics (e.g., age, technical level, biological maturity), and psychophysiological factors (e.g., fatigue and recovery status). Within an integrated training perspective, SSGs represent an effective methodological tool to simultaneously stimulate technical, tactical, physical, and cognitive

components of performance. Smaller formats and adapted rule constraints tend to increase technical involvement, whereas contextual and recovery-related factors can substantially influence execution quality and precision. Overall, the evidence supports the strategic use of SSGs as an integrated training modality, provided that task design is developmentally aligned and methodologically structured to optimize technical outcomes while preserving the ecological validity of game-based practice.

## Ethics Approval

Ethical approval was not required for this study, as it is a systematic review relying solely on previously published and publicly accessible data.

## Informed Consent

Not applicable.

## Data Availability Statement

All data analyzed in this study were obtained from previously published sources cited in the reference list. No new datasets were created.

## AI Transparency Statement

AI-assisted tools were used exclusively for language refinement. The authors retain full responsibility for the content and its scientific accuracy.

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## Conflicts of Interest

The authors declare no conflicts of interest.

## References

Little, T., & Williams, A.G. (2006). Suitability of Soccer Training Drills for Endurance Training. *The Journal of Strength and Conditioning Research, 20*(2), 316. https://doi.org/10.1519/R-17094.1

Parlebas, P. (2020). The Universals of Games and Sports. *Frontiers in Psychology,* 11, 593877. https://doi.org/10.3389/fpsyg.2020.593877

Helgerud, J., Engen, L.C., Wisløff, U., & Hoff, J. (2001). Aerobic endurance training improves soccer performance. *Medicine and Science in Sports and Exercise, 33*(11), 1925-1931. https://doi.org/10.1097/00005768-200111000-00019

Radziminski, L., Rompa, P., Barnat, W., Dargiewicz, R., & Jastrzebski, Z. (2013). A Comparison of the Physiological and Technical Effects of High-Intensity Running and Small-Sided Games in Young Soccer Players. *International Journal of Sports Science & Coaching, 8*(3), 455-466. https://doi.org/10.1260/1747-9541.8.3.455

Michailidis, Y. (2013). Small sided games in soccer training. *Journal of Physical Education and Sport, 13*(3), 392-399. https://doi.org/10.7752/jpes.2013.03063

Francesco, S., Matteo, B., & Mario, L. (2015). The analysis of discriminant factors related to team match performances in the 2012 European Football Championship. *Journal of Physical Education and Sport, 2015*(03), 460-465. https://doi.org/10.7752/jpes.2015.03069

Francesco, S., Giuseppe, C., & Mario, L. (2016). Technical performance profiles in the European Football Championship 2016. *Journal of Physical Education and Sport, 2016*(04), 1304–1309. https://doi.org/10.7752/jpes.2016.04207

Clemente, F.M. (2016). *Small-Sided and Conditioned Games in Soccer Training: The Science and Practical Applications.* Springer Singapore. https://doi.org/10.1007/978-981-10-0880-1

Chootsungnoen, P., Leenoi, P., & Suwannate, C. (2025b). The influence of number of floater players on internal and external load in small-sided games. *Retos,* 68, 299-307. https://doi.org/10.47197/retos.v68.112986

Muhyi, M., Suharti, S., Puspodari, P., Syarif, A., Nugroho Putro, B., Cahyanto Wibawa, J., & Ayubi, N. (2025). Physiological mechanisms of increasing maximal oxygen volume through small sided games training: A systematic review. *Retos,* 69, 1215-1225. https://doi.org/10.47197/retos.v69.116525

Owen, A.L., Wong, D.P., McKenna, M., & Dellal, A. (2011). Heart Rate Responses and Technical Comparison Between Small- vs. Large-Sided Games in Elite Professional Soccer. *Journal of Strength and Conditioning Research, 25*(8), 2104-2110. https://doi.org/10.1519/JSC.0b013e3181f0a8a3

Tan, C.W. K., Chow, J.Y., & Davids, K. (2012). 'How does TGfU work?': Examining the relationship between learning design in TGfU and a nonlinear pedagogy. *Physical Education & Sport Pedagogy, 17*(4), 331-348. https://doi.org/10.1080/17408989.2011.582486

Hill-Haas, S.V., Dawson, B., Impellizzeri, F.M., & Coutts, A.J. (2011). Physiology of Small-Sided Games Training in Football: A Systematic Review. *Sports Medicine, 41*(3), 199-220. https://doi.org/10.2165/11539740-000000000-00000

Aguiar, M., Botelho, G., Lago, C., Maças, V., & Sampaio, J. (2012). A Review on the Effects of Soccer Small-Sided Games. *Journal of Human Kinetics, 33*(2012), 103-113. https://doi.org/10.2478/v10078-012-0049-x

Clemente, F.M., Lourenço Martins, F.M., & Mendes, R.S. (2014). Developing Aerobic and Anaerobic Fitness Using Small-Sided Soccer Games: Methodological Proposals. *Strength & Conditioning Journal, 36*(3), 76-87. https://doi.org/10.1519/SSC.0000000000000063

Essafi, S., Brouki, Y., El Machrouh, Y., Khali, C., Barkaoui, M., Eloirdi, A., & Chokri, A. (2026). Integrated training through small-sided games: Effects on football players' tactical engagement. A systematic review. *Retos,* 75, 675-690. https://doi.org/10.47197/retos.v75.118254

Ometto, L., Vasconcellos, F.V., Cunha, F.A., Teoldo, I., Souza, C.R. B., Dutra, M.B., O'Sullivan, M., & Davids, K. (2018). How manipulating task constraints in small-sided and

conditioned games shapes emergence of individual and collective tactical behaviours in football: A systematic review. *International Journal of Sports Science & Coaching, 13*(6), 1200-1214. https://doi.org/10.1177/1747954118769183

Bujalance-Moreno, P., Latorre-Román, P.Á., & García-Pinillos, F. (2019). A systematic review on small-sided games in football players: Acute and chronic adaptations. *Journal of Sports Sciences, 37*(8), 921-949. https://doi.org/10.1080/02640414.2018.1535821

Sarmento, H., Clemente, F.M., Harper, L.D., Costa, I.T. D., Owen, A., & Figueiredo, A.J. (2018). Small sided games in soccer - a systematic review. *International Journal of Performance Analysis in Sport, 18*(5), 693-749. https://doi.org/10.1080/24748668.2018.1517288

Clemente, F.M., & Sarmento, H. (2020). The effects of small-sided soccer games on technical actions and skills: A systematic review. *Human Movement, 21*(3), 100-119. https://doi.org/10.5114/hm.2020.93014

Francesco Sgrò, Salvatore Bracco, Salvatore Pignato, & Mario Lipoma. (2018). Small-Sided Games and Technical Skills in Soccer Training: Systematic Review and Implications for Sport and Physical Education Practitioners. *Journal of Sports Science, 6*(1). https://doi.org/10.17265/2332-7839/2018.01.002

Moher, D., Liberati, A., Tetzlaff, J., & Altman, D.G. (2010). Preferred reporting items for systematic reviews and meta-analyses: The PRISMA statement. *International Journal of Surgery, 8*(5), 336-341. https://doi.org/10.1016/j.ijsu.2010.02.007

Sarmento, H., Clemente, F. M., Araújo, D., Davids, K., McRobert, A., & Figueiredo, A. (2018). What Performance Analysts Need to Know About Research Trends in Association Football (2012–2016): A Systematic Review. *Sports Medicine, 48*(4), 799–836. https://doi.org/10.1007/s40279-017-0836-6

Oh, S.H., & Joo, C.H. (2018). Comparison of technical and physical activities between 8 vs. 8 and 11 vs. 11 games in young Korean soccer players. *Journal of Exercise Rehabilitation, 14*(2), 253-258. https://doi.org/10.12965/jer.1836034.017

Torrents, C., Ric, A., Hristovski, R., Torres-Ronda, L., Vicente, E., & Sampaio, J. (2016). Emergence of Exploratory, Technical and Tactical Behavior in Small-Sided Soccer Games when Manipulating the Number of Teammates and Opponents. *PLOS ONE, 11*(12), e0168866. https://doi.org/10.1371/journal.pone.0168866

Sanchez-Sanchez, J., Hernández, D., Casamichana, D., Martínez-Salazar, C., Ramirez-Campillo, R., & Sampaio, J. (2017). Heart Rate, Technical Performance, and Session-RPE in Elite Youth Soccer Small-Sided Games Played with Wildcard Players. *Journal of Strength and Conditioning Research, 31*(10), 2678-2685. https://doi.org/10.1519/JSC.0000000000001736

Bergmann, F., Braksiek, M., & Meier, C. (2022). The influence of different game formats on technical actions and playing time parameters - A study with under-7 and under-9 soccer players in a competitive context. *International Journal of Sports Science & Coaching, 17*(5), 1089-1100. https://doi.org/10.1177/17479541211051654

Clemente, F.M., Chen, Y.-S., Bezerra, J.P., Guiomar, J., & Lima, R. (2018). Between-format differences and variability of technical actions during small-sided soccer games played by young players. *Human Movement, 2018*(5), 114-120. https://doi.org/10.5114/hm.2018.83103

Alcântara, C.H., Teixeira, A.S., Teixeira, R.M., De Oliveira Dutra, G., Nakamura, F.Y., Castagna, C., & Da Silva, J.F. (2021). Manipulation of number of players and bouts duration in small-sided games in youth soccer players. *Sport Sciences for Health, 17*(3), 597-605. https://doi.org/10.1007/s11332-020-00715-6

Wang, T., Xue, T., & He, J. (2024). Do Different Playing Formats and Aerobic Capacity Influence Variances in Psychophysiological Demands and Technical Performance in Small-Sided Games? A Study among Under-17 Male Soccer Players. *Journal of Sports Science and Medicine,* 619-627. https://doi.org/10.52082/jssm.2024.619

Yılmaz, O., & Soylu, Y. (2024). A Comparative Study of the Effects of Small-Sided Game Formats on Internal Load and Technical Responses in Soccer. *Pamukkale Journal of Sport Sciences, 15*(2), 416-431. https://doi.org/10.54141/psbd.1467311

Clemente, F.M., Sarmento, H., Costa, I.T., Enes, A.R., & Lima, R. (2019). Variability of Technical Actions During Small-Sided Games in Young Soccer Players. *Journal of Human Kinetics, 69*(1), 201-212. https://doi.org/10.2478/hukin-2019-0013

Chootsungnoen, P., Leenoi, P., & Suwannate, C. (2025a). Defining the Effects of Floaters' Number on Internal Load, External Load and Technical Skills in Small-Sided Soccer Games. *Physical Education Theory and Methodology, 25*(2), 366-373. https://doi.org/10.17309/tmfv.2025.2.18

Coutinho, D., Gonçalves, B., Travassos, B., Folgado, H., Figueira, B., & Sampaio, J. (2020). Different Marks in the Pitch Constraint Youth Players' Performances During Football Small-sided Games. *Research Quarterly for Exercise and Sport, 91*(1), 15-23. https://doi.org/10.1080/02701367.2019.1645938

Folgado, H., Bravo, J., Pereira, P., & Sampaio, J. (2019). Towards the use of multidimensional performance indicators in football small-sided games: The effects of pitch orientation. *Journal of Sports Sciences, 37*(9), 1064-1071. https://doi.org/10.1080/02640414.2018.1543834

Olthof, S.B. H., Frencken, W.G. P., & Lemmink, K.A. P.M. (2018). Match-derived relative pitch area changes the physical and team tactical performance of elite soccer players in small-sided soccer games. *Journal of Sports Sciences, 36*(14), 1557-1563. https://doi.org/10.1080/02640414.2017.1403412

Jara, D., Ortega, E., Gómez, M.-Á., & Baranda, P.S. D. (2018). Effect of Pitch Size on Technical-Tactical Actions of the Goalkeeper in Small-Sided Games. *Journal of Human Kinetics, 62*(1), 157-166. https://doi.org/10.1515/hukin-2017-0167

Martone, D., Giacobbe, M., Capobianco, A., Imperlini, E., Mancini, A., Capasso, M., Buono, P., & Orrù, S. (2017). Exercise Intensity and Technical Demands of Small-Sided Soccer Games for Under-12 and Under-14 Players: Effect of Area per Player. *Journal of Strength and Conditioning Research, 31*(6), 1486-1492. https://doi.org/10.1519/JSC.0000000000001615

Joo, C.H., Hwang-Bo, K., & Jee, H. (2016). Technical and Physical Activities of Small-Sided Games in Young Korean Soccer Players. *Journal of Strength and Conditioning Research, 30*(8), 2164-2173. https://doi.org/10.1519/JSC.0000000000001319

Nunes, N.A., Gonçalves, B., Davids, K., Esteves, P., & Travassos, B. (2021). How manipulation of playing area dimensions in ball possession games constrains physical effort and technical actions in under-11, under-15 and under-23 soccer players. *Research in Sports Medicine, 29*(2), 170-184. https://doi.org/10.1080/15438627.2020.1770760

Qiao, W., Hua, K., Zhang, J., Song, D., Li, J., Chen, X., & Liang, D. (2025). Higher Heart Rate Intensity Can Negatively Impact Tactical Decision-Making and Technical Accuracy in Small-Sided Games: A Study on The Effects of Field Size and Scoring Method Manipulation. *Journal of Sports Science and Medicine,* 522-531. https://doi.org/10.52082/jssm.2025.522

Machado, J.C., Ribeiro, J., Palheta, C.E., Alcântara, C., Barreira, D., Guilherme, J., Garganta, J., & Scaglia, A.J. (2019). Changing Rules and Configurations During Soccer Small-Sided and Conditioned Games. How Does It Impact Teams' Tactical Behavior? *Frontiers in Psychology,* 10, 1554. https://doi.org/10.3389/fpsyg.2019.01554

Rago, V., Rebelo, A.N., Pizzuto, F., & Barreira, D. (2018). Small-sided soccer games on sand are more physically demanding but less technically specific compared to games on artificial turf. *The Journal of Sports Medicine and Physical Fitness, 58*(4). https://doi.org/10.23736/S0022-4707.16.06708-6

Batista, J., Goncalves, B., Sampaio, J., Castro, J., Abade, E., & Travassos, B. (2019). The Influence of Coaches' Instruction on Technical Actions, Tactical Behaviour, and External Workload in Football Small-Sided Games. *Montenegrin Journal of Sports Science and Medicine, 8*(1), 29-36. https://doi.org/10.26773/mjssm.190305

Pulling, C., Twitchen, A., & Pettefer, C. (2016). Goal Format in Small-Sided Soccer Games: Technical Actions and Offensive Scenarios of Prepubescent Players. *Sports, 4*(4), 53. https://doi.org/10.3390/sports4040053

Castellano, J., Silva, P., Usabiaga, O., & Barreira, D. (2016). The influence of scoring targets and outer-floaters on attacking and defending team dispersion, shape and creation of space during small-sided soccer games. *Journal of Human Kinetics, 51*(1), 153-163. https://doi.org/10.1515/hukin-2015-0178

Soylu, Y., Arslan, E., Kilit, B., & Lane, A.M. (2024). Effects of coach encouragement on psychophysiological responses and technical actions in different small-sided soccer games. *International Journal of Sport and Exercise Psychology, 22*(9), 2169-2181. https://doi.org/10.1080/1612197X.2023.2273274

Rosten, M., Aune, T.K., & Dalen, T. (2025). The Impact of Touch Restrictions in Small-Sided Games on Soccer Players' Passing, Receiving, and Ball-Touch Temporal Intervals. *Journal of Human Kinetics.* https://doi.org/10.5114/jhk/196142

Rowat, O., Fenner, J., & Unnithan, V. (2017). Technical and physical determinants of soccer match-play performance in elite youth soccer players. *The Journal of Sports Medicine and Physical Fitness, 57*(4). https://doi.org/10.23736/S0022-4707.16.06093-X

Coutinho, D., Gonçalves, B., Santos, S., Travassos, B., Folgado, H., & Sampaio, J. (2022). Exploring how limiting the number of ball touches during small-sided games affects youth football players' performance across different age groups. *International Journal of Sports Science & Coaching, 17*(3), 545-557. https://doi.org/10.1177/17479541211037001

King, M., Barrett, S., Mclellan, R., Cox, J., Brown, M., Mackenzie, S., & Towlson, C. (2025). Does team size affect Scottish male academy soccer player technical, locomotor and psychosocial outcomes during age and maturity bio-banded small-sided games? *Journal of Sports Sciences,* 1-11. https://doi.org/10.1080/02640414.2025.2456408

Cherni, B., Marzouki, H., Selmi, O., Chen, Y.-S., Bouassida, A., & Chamari, K. (2025). Physiological, technical, and time-motion responses according to small-sided game formats and pitch size variations in adolescent male soccer players: Effects of biological maturity status. *Biology of Sport, 42*(3), 37-49. https://doi.org/10.5114/biolsport.2025.146788

McLean, S., Kerhervé, H., Naughton, M., Lovell, G., Gorman, A., & Solomon, C. (2016). The Effect of Recovery Duration on Technical Proficiency during Small Sided Games of Football. *Sports, 4*(3), 39. https://doi.org/10.3390/sports4030039

Christopher, J., Beato, M., & Hulton, A.T. (2016). Manipulation of exercise to rest ratio within set duration on physical and technical outcomes during small-sided games in elite youth soccer players. *Human Movement Science,* 48, 1-6. https://doi.org/10.1016/j.humov.2016.03.013

Badin, O.O., Smith, M.R., Conte, D., & Coutts, A.J. (2016). Mental Fatigue: Impairment of Technical Performance in Small-Sided Soccer Games. *International Journal of Sports Physiology and Performance, 11*(8), 1100-1105. https://doi.org/10.1123/ijspp.2015-0710

Trecroci, A., Boccolini, G., Duca, M., Formenti, D., & Alberti, G. (2020). Mental fatigue impairs physical activity, technical and decision-making performance during small-sided games. *PLOS ONE, 15*(9), e0238461. https://doi.org/10.1371/journal.pone.0238461

Selmi, O., Gonçalves, B., Ouergui, I., Levitt, D.E., Sampaio, J., & Bouassida, A. (2021). Influence of Well-Being Indices and Recovery State on the Technical and Physiological Aspects of Play During Small-Sided Games. *Journal of Strength & Conditioning Research, 35*(10), 2802-2809. https://doi.org/10.1519/JSC.0000000000003228

# Технічна залученість в іграх у малих складах: вплив обмежень завдання у футболі — систематичний огляд

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Авторський вклад: A – дизайн дослідження; B – збір даних; C – статаналіз; D – підготовка рукопису; E – збір коштів

Реферат. Стаття: 19 с., 5 табл., 1 рис., 59 джерел.

**Вступ.** У підготовці футболістів ігри в малих складах (Small-Sided Games, SSGs) широко використовуються як інтегрований засіб одночасного розвитку технічних, тактичних, фізичних і когнітивних компонентів спортивної діяльності. Проте ступінь впливу окремих обмежень завдання (task constraints) на технічну залученість досі не має узагальненого й послідовного висвітлення.

**Мета.** Цей систематичний огляд мав на меті дослідити, як різні обмеження завдання в іграх у малих складах впливають на технічну залученість футболістів у межах інтегрованої системи тренування.

**Матеріали і методи.** Систематичний пошук в електронних базах даних було проведено відповідно до загальноприйнятих рекомендацій щодо підготовки систематичних оглядів. До аналізу включено 35 досліджень, у яких вивчали вплив формату SSG, розмірів ігрового майданчика, модифікацій правил, віку, біологічної зрілості та їхнього комплексного впливу на технічну залученість. Методологічну якість досліджень було оцінено, а отримані результати узагальнено за тематичними категоріями.

**Результати.** Встановлено, що менші формати гри та зменшена кількість гравців сприяли підвищенню технічної залученості, тоді як розміри ігрового майданчика та правила зарахування очок впливали на характер передач, частоту ударів по воротах і володіння м›ячем. Обмеження кількості дотиків прискорювало циркуляцію м›яча, проте нерідко призводило до збільшення кількості технічних помилок, особливо у молодших гравців. Вік, технічна підготовленість і рівень біологічної зрілості істотно впливали на технічну ефективність. Психічна втома та недостатнє відновлення стабільно асоціювалися зі зниженням точності передач, погіршенням контролю м›яча та збільшенням кількості помилок.

**Обговорення.** Отримані результати узгоджуються з попередніми дослідженнями, які підкреслюють роль обмежень завдання у формуванні спортивної діяльності. Наявні дані підтверджують, що технічна залученість в іграх у малих складах формується внаслідок динамічної взаємодії структурних, онтогенетичних і психофізіологічних чинників.

**Висновки.** Ігри в малих складах є ефективним інтегрованим засобом тренування для підвищення технічної залученості за умови, що дизайн завдання відповідає закономірностям вікового розвитку спортсменів і враховує особливості тренувального контексту.

**Ключові слова:** ігри в малих складах, технічна залученість, інтегроване тренування, обмеження завдання, футбол.

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