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Comparing semi-professional and amateur game contexts in a Gk+4 vs. 4+Gk via Football Competence (Procedural Tactical Knowledge)

Comparando los contextos de juego semiprofesional y aficionado en un P+4 vs. 4+P vía Competencia Futbolística (Conocimiento Táctico Procedimental)

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Abstract. This study aimed to analyze the game context of the same task (Gk+4 vs. 4+Gk small-sided game) in two groups (8 semi-professionals and 8 amateurs), comparing the players' procedural tactical knowledge. 1377 tactical behaviors were analyzed via Football Competence Observation System (FOCOS), assessing volume and efficiency of 67 variables. Student's T-test for independent samples and Cohen's d-effect size were calculated. Using Bonferroni correction to control the family-wise error rate in each criterion of the observational tool, significant differences were found in 13 variables (volume, n = 1; efficiency, n = 12), with the following effect sizes (very large = 4; large = 9). The results revealed the game contexts differ mainly in the efficiency of the tactical behaviors out of the game center. From this finding, variables centered on the relationship with the ball, widely used to evaluate performance in team sports, must be judged carefully when comparing players of different divisions and categories; and coaches should prioritize their attention on what happens away from the ball, instead of focusing the feedback on those tactical behaviors that occur in the heat of the action.
Keywords: performance, decision making, comparative analysis, observational methodology, small-sided game

Resumen. Este estudio tuvo como objetivo analizar el contexto de juego de la misma tarea (un juego reducido P+4 vs. 4+P) en dos grupos (8 semiprofesionales y 8 aficionados), comparando el conocimiento táctico procedimental de los jugadores. Se analizaron 1377 conductas tácticas a través del Sistema de Observación de la Competencia Futbolística (FOCOS), evaluando el volumen y la eficiencia de 67 variables. Se calculó la prueba t de Student para muestras independientes y el tamaño del efecto d de Cohen. Usando la corrección de Bonferroni para controlar la tasa de error familiar en cada criterio de la herramienta de observación, se encontraron diferencias significativas en 13 variables (volumen, n = 1; eficiencia, n = 12), con los siguientes tamaños de efecto (muy grande = 4; grande = 9). Los resultados revelaron que los contextos de juego difieren principalmente en la eficiencia de las conductas tácticas que se desarrollan fuera del centro de juego. Desde este hallazgo, las variables centradas en la relación con el balón, ampliamente utilizadas para evaluar el rendimiento en deportes colectivos, deben ser juzgadas con cuidado al comparar jugadores de distintas divisiones y categorías; y los entrenadores deben priorizar su atención en lo que sucede lejos del balón, en lugar de centrar el feedback en aquellas conductas tácticas que ocurren en el fragor de la acción.
Palabras clave: rendimiento, toma de decisión, análisis comparativo, metodología observacional, juegos reducidos

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Introduction

Small-sided games (SSGs) are one of the most common drills used by coaches for football training (Halouani et al., 2014), since all the elements of the game interact together in a flexible way (Wein, 1995). Originating in non-formal street football, where players spontaneously adapt to the form of the game, reducing the size of the field and the number of players (Hill-Haas et al., 2011), they are presented as an excellent practice-tool to stress out the players' decision-making (Davids et al., 2013) and increase their creativity (Canton et al., 2022), due to its representativeness (Gonçalves et al., 2016; Olthof et al., 2019) with the real game context. The game context is called in this work as the set of game situations that give rise to the appearance of tactical behaviors that can be observed and analyzed, in this case, during the SSGs.

Coaches have a great influence on the task design (Urbano-Arévalo et al., 2020) and can alter the game context of any SSG through their intervention, either by manipulating the elements that make up the internal logic of the task at the structural level, or using action rules on the game principles or in the sub-roles developed by the players at the functional level. Also, a key tool for coaches during the training is the effective use of verbal instructions and feedback (More & Franks, 1996). The content of the feedback should be related to know-what to do (theory) and to know-how to do (practice) of the players. That is, the declarative tactical knowledge (DTK) and the procedural tactical knowledge (PTK), respectively. From this idea, the analysis of the game context of a same task played by semi-professional and amateur players allows us to differentiate the protagonists of the action from their tactical behaviors. This can give clues on how to guide the feedback by coaches.

PTK is intimately linked to the particular motor action (Kirkhart, 2001; Teoldo, Garganta, Greco, & Mesquita, 2011; Williams & Davids, 1995) and seems decisive in football competence (Parlebas, 2018) due to the complexity, unpredictability and randomness of events that this sport presents (Garganta, 1997). In recent years, there has been a growing interest in the study of PTK, reflected from the design of observational tools for this purpose. For example, "Performance assessment in team sports" -TSAP- (Gréhaigne, Godbout, & Bouthier, 1997), "Game performance assessment instrument" -GPAI- (Oslin et al., 1998), "Procedural tactical knowledge test" -KORA- (Kröger & Roth, 2002), validated by Memmert (2002),

"System of tactical assessment in soccer" -FUT-SAT- (Teoldo, Garganta, Greco, Mesquita, & Maia, 2011), "Game performance evaluation tool" -GPET- (García-López et al., 2013), "The Instrument for the Measurement of Learning and Performance in Football" -IMLPFoot- (García-Ceberino et al., 2020), "Tactical Assessment Instrument in Football" -TAIS- (Barquero-Ruiz et al., 2022) and "Football Competence Observation System" -FOCOS- (Sánchez-López et al., 2021), which was the tool used in this work.

Despite the existence of a wide variety of observational tools to evaluate PTK, only a few tactical variables have been investigated in comparison to the physical/physiological ones during SSGs (Brito e. Sousa et al., 2019), even knowing that the energy dimension is not the most relevant part of the motor behavior when trying to explain what performance consists in a motor-social situation such as playing football (Castellano & Clemente, 2020). Therefore, this study aims to analyze the differences that occur in a wide range of tactical variables presented in the game context of the same task (SSG Gk + 4 vs. 4 + Gk) in two different groups (semi-professionals and amateurs), comparing the football competence (procedural tactical knowledge) shown by the players from the tactical behaviors that they develop.

Method

Participants

Sixteen participants were analyzed using two different groups: eight semi-professional players (21.68 ± 1.38 years old), who were active in Spanish Second Division B playing in the reserve team of a "La Liga" club, and eight amateur players from a club of the last category of federated football in Madrid (25.30 ± 2.15 years old). Goalkeepers were not considered in any of the samples. In total, 1377 tactical behaviors (Semi-Professional = 725; Amateur = 652) were analyzed. All the players were informed about the protocol and characteristics of the study, carried out in accordance with the guidelines of the Declaration of Helsinki. Ethical approval was not required because no invasive measures were taken to obtain the data.

Instrument

The Football Competence Observational System (Sánchez-López et al., 2021) is formed by the combination of a field format and exhaustive and mutually exclusive category systems, based on six criteria: phase, role, own action of the sub-role, operational principle, core/specific principle and result of the action (see table 1).

Table 1.
Criteria and category systems of the Football Competence Observation System - FOCOS –

Phase	Role	Own action of the sub-role	Operational principle	Core/Specific principle	Result of the action
Attack	Attacker with the ball Attacker without the ball in the game center Attacker without the ball out of the game center	Ball control Driving Dribble Passing Shooting Move off-the-ball Positioning	Maintain ball possession Progress towards rival area Achieving the goal	Penetration Offensive coverage Depth mobility Width and length Offensive unity	Successful Improvable Wrong
Defense	Defender in the intervention space Defender in game center Defender out of game center	Tackling Interception Dissuading Relocating	Regain Possession Prevent opponent's progression Protect the goal	Delay Defensive coverage Balance Concentration Defensive unity	Successful Improvable Wrong

The coherent combination of the categories found in the criteria phase, role, own action of the sub-role, operational principle and core/specific principle, result in a series of "general tactical behaviors". This makes it possible to obtain not only scores based on the mentioned criteria but also on the general tactical behaviors that are presented in table 2. As a result, a total of 67 tactical variables (overall scores, n = 3; roles, n = 6; own actions of the sub-roles, n = 11; operational principle, n = 6; core/specific principles, n = 10; general tactical variable, n=31) can be analyzed.

Procedure

Two similar Gk + 4 v 4 + Gk SSGs were developed with the two different player groups. In both situations, tests were conducted on a double-area field (33 x 40 m.), according to the protocol proposed in the validation of the tool. Both SSGs were performed in two 4-minute sets with a 1-minute break between sets, and players performed the task under the official rules of the game, with the particularity of not using the offside rule. Also, the throw-ins were eliminated, and the goalkeepers were in charge of putting the ball into play after this type of interruptions, to lose the least effective playing time (Casamichana & Castellano, 2009).

A digital video camera (JVC Everio R Quad Proof full HD) was positioned in a tripod at the top of the field stands to record the tasks (see figure 1). Videos were downloaded into a laptop and the "*Lince Plus software*" (Soto et al., 2019) was used for the coding and data collection process. Subsequently, "*Microsoft Excel 365*" (Microsoft Corporation, Washington, USA) templates were used for the treatment of the data obtained and "*SPSS Statistics for Windows, v19*" (IBM Corporation, New York, USA) for descriptive and inferential analysis.

Table 2.
General tactical behaviors in the network of compatible category combinations in attack and defense

	Role	Sub-role (action)	Operational principle	Specific/Core principle	General Tactical Behavior that identifies the category channel
1	Attacker with the ball	Ball control	Progress towards rival area	Penetration	Control the ball ahead of previous action (*)
2	Attacker with the ball	Ball control	Maintain ball possession	Width and length	Control the ball at the same height or behind the previous action (*)
3	Attacker with the ball	Ball control	Achieving the goal	Penetration	Control the ball in the rival area or in front of the last defender (or surpassed this one)
4	Attacker with the ball	Driving	Progress towards rival area	Penetration	Driving the ball forward (*)
5	Attacker with the ball	Driving	Maintain ball possession	Width and length	Driving the ball backwards, right, or left (*)
6	Attacker with the ball	Driving	Achieving the goal	Penetration	Driving the ball in the rival area or in front of the last defender (or surpassed this one)
7	Attacker with the ball	Dribble	Progress towards rival area	Penetration	Dribble to beat the rival (*)
8	Attacker with the ball	Dribble	Maintain ball possession	Width and length	Dribble without progress avoiding rival tackle (*)
9	Attacker with the ball	Dribble	Achieving the goal	Penetration	Dribble in the rival area or in front of the last defender (or surpassed this one)
10	Attacker with the ball	Passing	Progress towards rival area	Penetration	Pass the ball forward (except to assist)
11	Attacker with the ball	Passing	Maintain ball possession	Width and length	Pass the ball backward, right, or left (except to assist)
12	Attacker with the ball	Passing	Achieving the goal	Penetration	Assist teammate to score goal
13	Attacker with the ball	Shooting	Achieving the goal	Penetration	Shoot at goal
14	Attacker without the ball in the game center	Move off-the-ball	Progress towards rival area	Depth mobility	Move giving close option ahead of the ball
15	Attacker without the ball in the game center	Move off-the-ball	Achieving the goal	Depth mobility	Appear in a space suitable to scoring a goal (near the team-mate with the ball)
16	Attacker without the ball in the game center	Positioning	Maintain ball possession	Offensive coverage	Take care of the back of the partner with the ball or give option close to the right / left
17	Attacker without the ball out of the game center	Move off-the-ball	Progress towards rival area	Depth mobility	Move away from the ball appearing between rival lines or behind the defense
18	Attacker without the ball out of the game center	Move off-the-ball	Achieving the goal	Depth mobility	Appear in a space suitable to scoring a goal (away from the teammate with the ball)
19	Attacker without the ball out of the game center	Positioning	Progress towards rival area	Width and length	Give depth to the attack by positioning in length
20	Attacker without the ball out of the game center	Positioning	Maintain ball possession	Width and length	Give amplitude to the attack by positioning in width
21	Attacker without the ball out of the game center	Positioning	Maintain ball possession	Offensive unity	Relocate in coordination with the teammates on the last line
22	Defender in the intervention space	Tackling	Regain Possession	Delay	Make a tackle to the rival
23	Defender in the intervention space	Interception	Regain Possession	Delay	Intercept, clear or divert a pass
24	Defender in the intervention space	Interception	Protect the goal	Delay	Block a shot
25	Defender in the intervention space	Dissuading	Prevent opponent's progression	Delay	Redirect the opponent's attack
26	Defender in the intervention space	Dissuading	Protect the goal	Delay	Do not give the opponent a shot option without entering him (avoid possible shot)
28	Defender in game center	Dissuading	Prevent opponent's progression	Defensive coverage	Take care of the partner's back in the intervention space in a staggered manner
28	Defender in game center	Dissuading	Prevent opponent's progression	Balance	Move to create superiority in the game center or mark/watch opponents
29	Defender out of game center	Dissuading	Prevent opponent's progression	Defensive unity	Create uncertainty in the last opponent line or reduce the effective playing space
30	Defender out of game center	Relocating	Protect the goal	Defensive unity	Relocation in the last defensive line reducing the effective playing space
31	Defender out of game center	Relocating	Protect the goal	Concentration	Increase the protection of the goal, marking or watching opponents

(*) Except in the rival area or in front of the last defender (or surpassed this one)

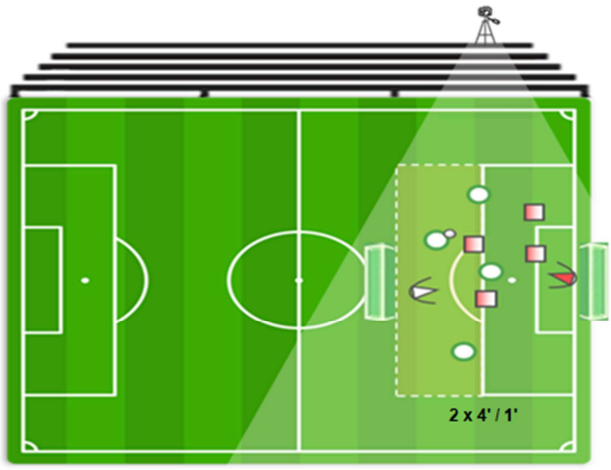

Figure 1.Configuration test FOCOS application

Statistical Analysis

Using excel and taking the proposed observation system, data processing is performed to obtain the volume and effectiveness index of each of the 67 tactical variables. The volume is understood as the number of times that the player develops tactical behaviors associated with each variable, while the effectiveness index is represented by the volume of successful tactical behaviors divided by the number of tactical behaviors displayed by the player also associated with each variable.

The volume and efficiency data were analyzed using the Student's T-test for independent samples. The Bonferroni correction was used to control the family-wise error rate, establishing statistical significance at p value by set of variables in each criterion of the tool: Overall scores ($n = 3$, $p \leq .017$), Roles ($n = 6$, $p \leq .008$), Sub-role actions ($n = 11$, $p \leq .005$), Operational principles ($n = 6$, $p \leq .008$), Core/specific principles ($n = 10$, $p \leq .005$) and General tactical behaviors ($n = 31$, $p \leq .002$). Cohen's d-effect size

(Hopkins et al., 2009) was also calculated in sensitive variables to assess the magnitude of the difference between both groups: Differences based on effect size are referred to descriptively as very large -XL- ($d \geq 2$), large -L- ($2.0 > d \geq 1.2$), moderate -M- ($1.2 > d \geq 0.6$), small -S- ($0.6 > d \geq 0.2$) and trivial -TR- ($0.2 > d \geq 0$).

Results

Volume

Table 3 presents a descriptive and inferential analysis comparing the volume of tactical behaviors between the semi-professional group and the amateur group.

Table 3.
Volume of behaviors (Mean ± SD) and differences of semi-professional and amateur football players in each variable

Criteria	Variable	Semi-professional group	Amateur group	*p* value	Mean difference (95% IC)	Cohen's d	Influence
Overall scores ($p \leq .017$)	Total Average	90.62 ± 11.84	81.5 ± 8.12	0.094	9.13 [-1.77, 20.02]	0.89	Moderate
	Offensive Average	55.25 ± 14.81	48.62 ± 7.36	0.276	6.63 [-5.92, 19.17]	0.57	Small
	Defensive Average	35.37 ± 5.21	33.25 ± 5.17	0.427	2.13 [-3.44, 7.69]	0.02	Trivial
Role ($p \leq .008$)	Attacker with the ball	27.50 ± 7.58	26.13 ± 8.56	0.739	1.38 [-7.29, 10.04]	0.16	Trivial
	Attacker without the ball in the game center	17.13 ± 4.79	15.75 ± 3.11	0.507	1.38 [-2.96, 5.71]	0.34	Small
	Attacker without the ball out of the game center	10.38 ± 4.63	6.88 ± 3.83	0.122	3.50 [-1.06, 8.06]	0.82	Moderate
	Defender in the intervention space	15.25 ± 5.47	15.63 ± 5.24	0.891	-0.38 [-6.12, 5.37]	-0.07	Trivial
	Defender in game center	9.00 ± 3.34	8.75 ± 3.37	0.884	0.25 [-3.35, 3.85]	0.07	Trivial
	Defender out of game center	10.50 ± 3.89	8.63 ± 4.87	0.409	1.88 [-2.85, 6.60]	0.42	Small
Own action of the sub-role ($p \leq .005$)	Ball control	9.38 ± 3.34	9.25 ± 3.20	0.94	0.13 [-3.38, 3.63]	0.03	Trivial
	Driving	3.50 ± 1.77	2.88 ± 2.75	0.597	0.63 [-1.86, 3.11]	0.26	Small
	Dribble	2.00 ± 1.41	1.75 ± 1.39	0.727	0.25 [-1.25, 1.75]	0.17	Trivial
	Passing	9.25 ± 4.80	8.63 ± 2.39	0.747	0.63 [-3.44, 4.69]	0.16	Trivial
	Shooting	3.38 ± 2.50	3.63 ± 2.13	0.833	-0.25 [-2.74, 2.24]	-0.1	Trivial
	Move off-the-ball	16.00 ± 5.10	13.63 ± 3.58	0.299	2.38 [-2.35, 7.10]	0.53	Small
	Positioning	12.00 ± 4.87	11.13 ± 3.87	0.697	0.88 [-3.84, 5.59]	0.19	Trivial
	Tackling	2.00 ± 1.51	1.63 ± 0.92	0.558	0.38 [-0.97, 1.72]	0.29	Small
	Interception	3.25 ± 1.49	3.38 ± 1.69	0.877	-0.13 [-1.83, 1.58]	-0.08	Trivial
	Dissuading	20.38 ± 6.78	21.50 ± 6.35	0.737	-1.13 [-8.17, 5.92]	-0.17	Trivial
	Relocating	9.13 ± 3.64	6.50 ± 4.75	0.235	2.63 [-1.91, 7.16]	0.62	Moderate
Opera-tional principle ($p \leq .008$)	Progress towards rival area	23.75 ± 5.60	17.50 ± 7.50	0.08	6.25 [-0.85, 13.35]	0.94	Moderate
	Maintain ball possession	18.13 ± 10.97	15.88 ± 8.36	0.652	2.25 [-8.21, 12.71]	0.23	Small
	Achieving the goal	13.50 ± 4.63	18.00 ± 4.90	0.08	-4.50 [-9.61, 0.61]	-0.95	Moderate
	Prevent opponent's progression	19.00 ± 6.46	17.63 ± 6.23	0.671	1.38 [-5.43, 8.18]	0.21	Small
	Regain Possession	3.50 ± 1.41	3.75 ± 1.83	0.764	-0.25 [-2.01, 1.51]	-0.15	Trivial
	Protect the goal	12.25 ± 4.77	11.63 ± 4.66	0.795	0.63 [-4.43, 5.68]	0.13	Trivial
Core/Specific principle ($p \leq .005$)	Penetration	19.00 ± 4.75	19.50 ± 6.55	0.864	-0.50 [-6.63, 5.63]	-0.08	Trivial
	Offensive coverage	4.25 ± 3.69	6.25 ± 5.20	0.39	-2.00 [-6.84, 2.84]	-0.44	Small
	Depth mobility	16.00 ± 5.10	13.63 ± 3.58	0.299	2.38 [-2.35, 7.10]	0.54	Small
	Width and length	10.50 ± 3.12	8.13 ± 2.75	0.128	2.38 [-0.78, 5.53]	0.8	Moderate
	Offensive unity	1.75 ± 2.12	1.38 ± 1.06	0.662	0.38 [-1.42, 2.17]	0.22	Small
	Delay	15.25 ± 5.47	15.63 ± 5.24	0.891	-0.38 [-6.12, 5.37]	-0.07	Trivial
	Defensive coverage	5.25 ± 1.67	5.38 ± 2.50	0.908	-0.13 [-2.41, 2.16]	-0.06	Trivial
	Balance	3.75 ± 2.96	3.38 ± 2.50	0.789	0.38 [-2.57, 3.32]	0.13	Trivial
	Concentration	4.75 ± 2.66	5.13 ± 4.49	0.842	-0.38 [-4.33, 3.58]	0.1	Trivial
	Defensive unity	5.75 ± 2.82	3.50 ± 1.41	0.063	2.25 [-0.14, 4.64]	1	Moderate
General tactical behavior ($p \leq .002$)	Control the ball ahead of previous action (**)	5.63 ± 2.26	4.38 ± 3.07	0.369	1.25 [-1.64, 4.14]	0.46	Small
	Control the ball at the same height or behind the previous action (**)	2.13 ± 2.70	2.75 ± 1.98	0.606	-0.63 [-3.16, 1.91]	-0.26	Small
	Control the ball in the rival area or in front of the last defender (or surpassed this one)	1.63 ± 1.06	2.13 ± 1.25	0.402	-0.50 [-1.74, 0.74]	-0.43	Small
	Driving the ball forward (**)	1.75 ± 0.89	1.13 ± 1.46	0.318	0.63 [-0.67, 1.92]	0.51	Small
	Driving the ball backwards, right, or left (**)	1.75 ± 0.89	1.13 ± 1.46	0.318	0.63 [-0.67, 1.92]	0.51	Small
	Driving the ball in the rival area or in front of the last defender (or surpassed this one)	0.00 ± 0.00	0.63 ± 0.74	0.032	-0.63 [-1.25, 0.00]		Indeterminant
	Dribble to beat the rival (**)	0.38 ± 0.52	0.50 ± 0.53	0.642	-0.13 [-0.69, 0.44]	-0.22	Small
	Dribble without progress avoiding rival tackle (**)	0.88 ± 1.13	0.50 ± 0.53	0.409	0.38 [-0.57, 1.32]	0.43	Small
	Dribble in the rival area or in front of the last defender (or surpassed this one)	0.75 ± 0.89	0.75 ± 0.89	1	0.00 [-0.95, 0.95]	0	Trivial
	Pass the ball forward (except to assist)	3.38 ± 2.45	3.25 ± 1.75	0.908	0.13 [-2.16, 2.41]	0.06	Trivial
	Pass the ball backward, right, or left (except to assist)	3.75 ± 2.71	2.25 ± 1.75	0.21	1.50 [-0.95, 3.95]	0.68	Moderate
	Assist teammate to score goal	2.13 ± 1.46	3.13 ± 1.64	0.219	-1.00 [-2.67, 0.67]	-0.64	Moderate
	Shoot at goal	3.38 ± 2.50	3.63 ± 2.13	0.833	-0.25 [-2.74, 2.24]	-0.1	Trivial
	Move giving close option ahead of the ball	9.13 ± 2.03	5.38 ± 2.45	0.005	3.75 [1.34, 6.16]	1.67	Large
	Appear in a space suitable to scoring a goal (near the teammate with the ball)	3.75 ± 3.69	4.13 ± 2.75	0.821	-0.38 [-3.87, 3.12]	0.11	Trivial
	Take care of the back of the partner with the ball or give option close to the right / left	4.25 ± 3.69	6.25 ± 5.20	0.39	-2.00 [-6.84, 2.84]	-0.44	Small
	Move away from the ball appearing between rival lines or behind the defense	1.25 ± 0.71	0.50 ± 1.07	0.12	0.75 [-0.22, 1.72]	0.82	Moderate
	Appear in a space suitable to scoring a goal (away from the teammate with the ball)	1.38 ± 1.85	1.50 ± 1.20	0.875	-0.13 [-1.79, 1.54]	0.08	Trivial
	Give depth to the attack by positioning in length	2.38 ± 2.50	1.88 ± 2.47	0.694	0.50 [-2.17, 3.17]	0.2	Small
	Give amplitude to the attack by positioning in width	3.63 ± 2.88	1.63 ± 1.69	0.112	2.00 [-0.53, 4.53]	0.84	Moderate
	Relocate in coordination with the teammates on the last line	1.75 ± 2.12	1.38 ± 1.06	0.662	0.38 [-1.42, 2.17]	0.22	Small
	Make a tackle to the rival	2.00 ± 1.51	1.63 ± 0.92	0.558	0.38 [-0.97, 1.72]	0.3	Small
	Intercept, clear or divert a pass	1.50 ± 0.76	2.13 ± 1.89	0.399	-0.63 [-2.17, 0.92]	-0.43	Small
	Block a shot	1.75 ± 1.28	1.25 ± 1.04	0.405	0.50 [-0.75, 1.75]	0.42	Small
	Redirect the opponent's attack	8.63 ± 3.54	6.75 ± 4.17	0.349	1.88 [-2.27, 6.02]	0.48	Small
	Do not give the opponent a shot option without entering him (avoid possible shot)	1.38 ± 1.41	3.88 ± 1.25	0.002 *	-2.50 [-3.93, -1.07]	-1.87	Large
	Take care of the partner's back in the intervention space in a staggered manner	5.25 ± 1.67	5.38 ± 2.50	0.908	-0.13 [-2.41, 2.16]	-0.06	Trivial
	Move to create superiority in the game center or mark/watch opponents	3.75 ± 2.96	3.38 ± 2.50	0.789	0.38 [-2.57, 3.32]	0.13	Trivial
	Create uncertainty in the last opponent line or reduce the effective playing space	1.38 ± 0.92	2.13 ± 1.55	0.259	-0.75 [-2.12, 0.62]	-0.59	Small
	Relocation in the last defensive line reducing the effective playing space	4.38 ± 2.83	1.38 ± 1.30	0.016	3.00 [0.64, 5.36]	1.36	Large
	Increase the protection of the goal, marking or watching opponents	4.75 ± 2.66	5.13 ± 4.49	0.842	-0.38 [-4.33, 3.58]	-0.1	Trivial

(*) Mean Differences, confidence limits and standardized (Cohen) differences between semi-professional players (n = 8) and amateur players (n = 8) (**) Except in the rival area or in front of the last defender (or surpassed this one)

Table 4.
Efficiency of behaviors (Mean ± SD) and differences of semi-professional and amateur football players in each variable

Criteria	Variable	Semi-professional group	Amateur group	*p* value	Mean difference (95% IC)	Cohen's d	Influence
Overall scores (***) ($p \leq .017$)	Total Average	8.11 ± 0.67	6.43 ± 0.86	0.001 *	1.68 [0.85, 2.50]	2.18	Very Large
	Offensive Average	9.01 ± 0.68	7.38 ± 1.08	0.003 *	1.63 [0.66, 2.60]	1.81	Large
	Defensive Average	7.20 ± 0.86	5.48 ± 1.58	0.017 *	1.73 [0.32, 3.13]	1.35	Large
Role ($p \leq .008$)	Attacker with the ball	0.88 ± 0.06	0.75 ± 0.12	0.011	0.14 [0.04, 0.24]	1.37	Large
	Attacker without the ball in the game center	0.87 ± 0.11	0.81 ± 0.08	0.242	0.06 [-0.05, 0.16]	0.62	Moderate
	Attacker without the ball out of the game center	0.96 ± 0.06	0.77 ± 0.15	0.006 *	0.19 [0.06, 0.31]	1.66	Large
	Defender in the intervention space	0.63 ± 0.10	0.51 ± 0.14	0.078	0.12 [-0.02, 0.25]	0.98	Moderate
	Defender in game center	0.89 ± 0.09	0.71 ± 0.18	0.024	0.18 [0.03, 0.34]	1.26	Large
	Defender out of game center	0.92 ± 0.06	0.54 ± 0.30	0.004 *	0.38 [0.12, 0.63]	1.76	Large
Own action of the sub-role ($p \leq .005$)	Ball control	0.96 ± 0.04	0.85 ± 0.19	0.161	0.10 [-0.05, 0.25]	0.8	Moderate
	Driving	0.88 ± 0.35	0.48 ± 0.47	0.077	0.40 [-0.05, 0.84]	0.96	Moderate
	Dribble	0.88 ± 0.35	0.58 ± 0.42	0.147	0.30 [-0.12, 0.71]	0.78	Moderate
	Passing	0.80 ± 0.11	0.70 ± 0.12	0.107	0.10 [-0.02, 0.22]	0.87	Moderate
	Shooting	0.81 ± 0.22	0.64 ± 0.31	0.21	0.18 [-0.11, 0.47]	0.63	Moderate
	Move off-the-ball	0.88 ± 0.12	0.78 ± 0.07	0.097	0.09 [-0.02, 0.20]	1.01	Moderate
	Positioning	0.94 ± 0.05	0.79 ± 0.09	0.002 *	0.14 [0.06, 0.22]	2.06	Very Large
	Tackling	0.31 ± 0.32	0.65 ± 0.35	0.068	-0.33 [-0.69, 0.03]	-1.01	Moderate
	Interception	0.59 ± 0.21	0.46 ± 0.43	0.436	0.14 [-0.24, 0.51]	0.38	Small
	Dissuading	0.78 ± 0.12	0.58 ± 0.13	0.006	0.20 [0.07, 0.33]	1.59	Large
	Relocating	0.92 ± 0.07	0.61 ± 0.29	0.02	0.31 [0.06, 0.56]	1.47	Large
Operational principle ($p \leq .008$)	Progress towards rival area	0.88 ± 0.11	0.78 ± 0.07	0.061	0.10 [-0.01, 0.20]	1.08	Moderate
	Maintain ball possession	0.93 ± 0.05	0.77 ± 0.11	0.006 *	0.16 [0.06, 0.25]	1.87	Large
	Achieving the goal	0.87 ± 0.07	0.72 ± 0.09	0.001 *	0.15 [0.07, 0.24]	1.86	Large
	Prevent opponent's progression	0.82 ± 0.08	0.62 ± 0.15	0.004 *	0.20 [0.07, 0.33]	1.66	Large
	Regain Possession	0.71 ± 0.24	0.70 ± 0.19	0.917	0.01 [-0.22, 0.24]	0.04	Trivial
	Protect the goal	0.74 ± 0.08	0.48 ± 0.19	0.004 *	0.25 [0.09, 0.41]	1.78	Large
Core/Specific principle ($p \leq .005$)	Penetration	0.86 ± 0.07	0.72 ± 0.11	0.006	0.15 [0.05, 0.25]	1.52	Large
	Offensive coverage	0.69 ± 0.43	0.89 ± 0.11	0.24	-0.20 [-0.57, 0.16]	-0.63	Moderate
	Depth mobility	0.88 ± 0.12	0.78 ± 0.07	0.097	0.09 [-0.02, 0.20]	1.01	Moderate
	Width and length	0.98 ± 0.04	0.85 ± 0.13	0.027	0.13 [0.02, 0.24]	1.35	Large
	Offensive unity	0.64 ± 0.44	0.53 ± 0.39	0.606	0.11 [-0.34, 0.55]	0.26	Small
	Delay	0.63 ± 0.10	0.51 ± 0.14	0.078	0.12 [-0.02, 0.25]	0.98	Moderate
	Defensive coverage	0.87 ± 0.12	0.66 ± 0.31	0.089	0.21 [-0.04, 0.46]	0.89	Moderate
	Balance	0.96 ± 0.06	0.63 ± 0.34	0.03	0.33 [0.04, 0.61]	1.35	Large
	Concentration	0.77 ± 0.34	0.61 ± 0.33	0.349	0.16 [-0.20, 0.52]	0.46	Small
	Defensive unity	0.96 ± 0.06	0.48 ± 0.32	0.004 *	0.47 [0.20, 0.74]	2.08	Very Large
General tactical behavior ($p \leq .002$)	Control the ball ahead of previous action (**)	0.95 ± 0.06	0.97 ± 0.07	0.59	-0.02 [-0.08, 0.05]	-0.3	Small
	Control the ball at the same height or behind the previous action (**)	0.75 ± 0.46	0.75 ± 0.46	1	0.00 [-0.50, 0.50]	0	Trivial
	Control the ball in the rival area or in front of the last defender (or surpassed this one)	0.85 ± 0.35	0.55 ± 0.39	0.126	0.30 [-0.10, 0.70]	0.8	Moderate
	Driving the ball forward (**)	0.88 ± 0.35	0.38 ± 0.52	0.043	0.50 [0.02, 0.98]	1.13	Moderate
	Driving the ball backwards, right, or left (**)	0.88 ± 0.35	0.38 ± 0.52	0.043	0.50 [0.02, 0.98]	1.13	Moderate
	Driving the ball in the rival area or in front of the last defender (or surpassed this one)	0.00 ± 0.00	0.31 ± 0.46	0.095	-0.31 [-0.70, 0.07]	-	Indeterminant
	Dribble to beat the rival (**)	0.38 ± 0.52	0.38 ± 0.52	1	0.00 [-0.56, 0.56]	0	Trivial
	Dribble without progress avoiding rival tackle (**)	0.50 ± 0.53	0.50 ± 0.53	1	0.00 [-0.57, 0.57]	0	Trivial
	Dribble in the rival area or in front of the last defender (or surpassed this one)	0.38 ± 0.52	0.25 ± 0.40	0.598	0.13 [-0.37, 0.62]	0.28	Small
	Pass the ball forward (except to assist)	0.71 ± 0.35	0.52 ± 0.38	0.291	0.20 [-0.19, 0.59]	0.52	Small
	Pass the ball backward, right, or left (except to assist)	0.92 ± 0.13	0.66 ± 0.44	0.157	0.25 [-0.12, 0.63]	0.8	Moderate
	Assist teammate to score goal	0.74 ± 0.35	0.63 ± 0.32	0.515	0.11 [-0.25, 0.47]	0.32	Small
	Shoot at goal	0.81 ± 0.22	0.64 ± 0.31	0.21	0.18 [-0.11, 0.47]	0.63	Moderate
	Move giving close option ahead of the ball	0.85 ± 0.19	0.67 ± 0.32	0.192	0.18 [-0.10, 0.46]	0.68	Moderate
	Appear in a space suitable to scoring a goal (near the teammate with the ball)	0.95 ± 0.09	0.84 ± 0.18	0.164	0.10 [-0.05, 0.26]	0.77	Moderate
	Take care of the back of the partner with the ball or give option close to the right / left	0.69 ± 0.43	0.89 ± 0.11	0.24	-0.20 [-0.57, 0.16]	-0.64	Moderate
	Move away from the ball appearing between rival lines or behind the defense	0.84 ± 0.35	0.19 ± 0.37	0.003	0.66 [0.27, 1.04]	1.8	Large
	Appear in a space suitable to scoring a goal (away from the teammate with the ball)	0.50 ± 0.53	0.57 ± 0.40	0.763	-0.07 [-0.58, 0.44]	-0.15	Trivial
	Give depth to the attack by positioning in length	0.75 ± 0.46	0.62 ± 0.51	0.591	0.13 [-0.39, 0.66]	0.26	Small
	Give amplitude to the attack by positioning in width	0.86 ± 0.35	0.39 ± 0.42	0.029	0.47 [0.05, 0.88]	1.22	Large
	Relocate in coordination with the teammates on the last line	0.64 ± 0.44	0.53 ± 0.39	0.606	0.11 [-0.34, 0.55]	0.26	Small
	Make a tackle to the rival	0.31 ± 0.32	0.65 ± 0.35	0.068	-0.33 [-0.69, 0.03]	-1.01	Moderate
	Intercept, clear or divert a pass	0.81 ± 0.37	0.58 ± 0.50	0.314	0.23 [-0.24, 0.70]	0.52	Small
	Block a shot	0.16 ± 0.23	0.00 ± 0.00	0.095	0.16 [-0.04, 0.35]	-	Indeterminant
	Redirect the opponent's attack	0.75 ± 0.13	0.43 ± 0.23	0.004	0.32 [0.12, 0.52]	1.71	Large
	Do not give the opponent a shot option without entering him (avoid possible shot)	0.10 ± 0.20	0.37 ± 0.26	0.041	-0.26 [-0.51, -0.01]	-1.16	Moderate
	Take care of the partner's back in the intervention space in a staggered manner	0.87 ± 0.12	0.66 ± 0.31	0.089	0.21 [-0.04, 0.46]	0.89	Moderate
	Move to create superiority in the game center or mark/watch opponents	0.96 ± 0.06	0.63 ± 0.34	0.03	0.33 [0.04, 0.61]	1.241	Large
	Create uncertainty in the last opponent line or reduce the effective playing space	0.83 ± 0.36	0.40 ± 0.43	0.043	0.44 [0.02, 0.86]	1.08	Moderate
	Relocation in the last defensive line reducing the effective playing space	0.97 ± 0.05	0.34 ± 0.38	0.001 *	0.63 [0.34, 0.92]	2.32	Very Large
	Increase the protection of the goal, marking or watching opponents	0.77 ± 0.34	0.61 ± 0.33	0.349	0.16 [-0.20, 0.52]	0.47	Small

(*) Mean Differences, confidence limits and standardized (Cohen) differences between semi-professional players (n = 8) and amateur players (n = 8) (**) Except in the rival area or in front of the last defender (or surpassed this one) (***) Average of general tactical behaviors x 10

Overall scores

Although the semi-professional players were able to develop a greater number of behaviors than amateurs (90.62 ± 11.84 vs. 81.5 ± 8.12) during the task, both in attack (55.25 ± 14.81 vs. 48.62 ± 7.36) and in defense (35.37 ± 5.21 vs. 33.25 ± 5.17), no significant differences were found ($p \leq .017$) in these global variables in terms of volume.

Roles

No significant differences ($p \leq .008$) were found in any variable. Although, professionals perform more behaviors in practically all variables, especially when they acquired the role of "Attacker without the ball out of the game center" (10.38 ± 4.63 vs. 6.88 ± 3.83).

Own action of the sub-role

No significant differences ($p \leq .005$) were found in any variable. "Move off-the-ball" (16.00 ± 5.10 vs. 13.63 ± 3.58) and "Relocating" (9.13 ± 3.64 vs. 6.50 ± 4.75) were the variables in which semi-professionals stood out compared to amateurs.

Operational principles

No significant differences ($p \leq .008$) were found in any variables: However, semi-professionals perform more behaviors than amateurs for "Progress towards rival area" (23.75 ± 5.60 vs. 17.50 ± 7.50), and the semi-professionals performed fewer behaviors than the amateurs for "Achieving the goal" (13.50 ± 4.63 vs. 18.00 ± 4.90).

Core/Specific principles

No significant differences ($p \leq .005$) were found in any variable. However, "Width and length" (10.50 ± 3.12 vs. 8.13 ± 2.75) and "Defensive unity" (5.75 ± 2.82 vs. 3.50 ± 1.41) were the variables in which semi-professionals performed more behaviors than amateurs.

General Tactical Behaviors

Significant differences ($p \leq .002$) were found in the variable "Do not give the opponent a shot option without entering him (avoid possible shot)". This general tactical behavior was performed by semi-professionals significantly fewer times than by amateurs (1.38 ± 1.41 vs. 3.88 ± 1.25). "Move giving close option ahead of the ball" (9.13 ± 2.03 vs. 5.38 ± 2.45) and "Relocation in the last defensive line reducing the effective playing space" (4.38 ± 2.83 vs. 1.38 ± 1.30) were performed much more times by semi-professionals compared to amateurs, although no significant differences were found.

Efficiency (effectiveness index)

Table 4 presents a descriptive and inferential analysis comparing the effectiveness of tactical behaviors between the semi-professional group and the amateur group in each of the 67 tactical variables.

Overall scores

The semi-professionals displayed a total of significantly ($p \leq .017$) more effective behaviors (8.11 ± 0.67 vs. 6.43 ± 0.86) than the amateurs, both offensively (9.01 ± 0.68 vs. 7.38 ± 1.08) and defensively (7.20 ± 0.86 vs. 5.48 ± 1.58).

Roles

Significant differences ($p \leq .008$) were found in the efficiency of the behaviors of semi-professionals with respect to amateurs when they acquired the roles of "Attacker without the ball out of the game center" (0.96 ± 0.06 vs. 0.77 ± 0.15) and "Defender out of game center" (0.92 ± 0.06 vs. 0.54 ± 0.30).

Own action of the sub-role

Significant differences ($p \leq .005$) were found in the offensive variable "Positioning" (0.94 ± 0.05 vs. 0.79 ± 0.09). Although the semi-professional players were able to develop a greater efficiency than amateurs in the defensive variables "Dissuading" (0.78 ± 0.12 vs. 0.58 ± 0.13) and "Relocating" (0.92 ± 0.07 vs. 0.61 ± 0.29), no significant differences could be established.

Operational principles

Significant differences ($p \leq .008$) were found in the efficiency of the behaviors of semi-professionals compared to amateurs when they developed the following operational principles: "Maintain ball possession" (0.93 ± 0.05 vs. 0.77 ± 0.11), "Achieving the goal" (0.87 ± 0.07 vs. 0.72 ± 0.09), "Prevent opponent's progression" (0.82 ± 0.08 vs. 0.62 ± 0.15) and "Protect the goal" (0.74 ± 0.08 vs. 0.48 ± 0.19).

Core/Specific principles

Significant differences ($p \leq .005$) were found in favor of semi-professionals with respect to amateurs in the variable: "Defensive unity" (0.96 ± 0.06 vs. 0.48 ± 0.32). Other variables showed differences ($p \leq .03$), but not significantly, being professionals more efficiency than amateurs: "Penetration" (0.86 ± 0.07 vs. 0.72 ± 0.11), "Width and length" (0.98 ± 0.04 vs. 0.85 ± 0.13) and "Balance" (0.96 ± 0.06 vs. 0.63 ± 0.34).

General Tactical Behaviors

Significant differences ($p \leq .002$) were found in the variable "Do not give the opponent a shot option without entering him (avoid possible shot)" (0.10 ± 0.20 vs. 0.37 ± 0.26). This general tactical behavior was performed by semi-professionals less efficiently than by amateurs. Other variables showed differences ($p \leq .05$) in favor of semi-professionals, but no significatively: "Driving the ball forward" (0.88 ± 0.35 vs. 0.38 ± 0.52), "Driving the ball backwards, right, or left" (0.88 ± 0.35 vs. 0.38 ± 0.52), "Move away from the ball appearing between rival lines or behind the defense" (0.84 ± 0.35 vs. 0.19 ± 0.37), "Give amplitude to the attack by positioning in width" (0.86 ±

0.35 vs. 0.39 ± 0.42), "Redirect the opponent's attack" (0.75 ± 0.13 vs. 0.43 ± 0.23), "Move to create superiority in the game center or mark/watch opponents" (0.96 ± 0.06 vs. 0.63 ± 0.34), "Create uncertainty in the last opponent line or reduce the effective playing space" (0.83 ± 0.36 vs. 0.40 ± 0.43) and "Relocation in the last defensive line reducing the effective playing space" (0.97 ± 0.05 vs. 0.34 ± 0.38).

Discussion

Research on how teams behave has been carried out mainly from positional data (Castellano & Echeazarra, 2019; Clemente et al., 2014) and observational tools focused on the team as a whole (Aranda et al., 2019; Barreira et al., 2013; Castellano, 2000; Echeazarra et al., 2013). However, adopting a complex approach to sport not only means analyzing from the whole, but also not creating insignificance for the singular (Tamarit, 2007). In this sense, it should not be neglected how the protagonists of the action behave, that is, the football players. Therefore, the objective of this work was to analyze the differences that occur in the game context of the same task (SSG Gk + 4 vs. 4 + Gk) in two different groups (semi-professionals and amateurs), comparing the football competence shown by the players from the tactical behaviors that they develop. Therefore, the discussion revolves around the criteria and categories of the observational tool, considering the results obtained.

Overall Scores

Differences in playing experience may influence tactical behaviors (Folgado et al., 2014), and as expected, in the game context of the semi-professional group, a greater effectiveness could be seen in the tactical behaviors displayed than in the game context of the amateur group. This occurred both in attack and defense. This suggest that players with different levels are not able to perceive the same tactical opportunities from the same sources of information presented during the game (Machado et al., 2019). Regarding the volume of the behaviors, although no significant differences were found, the semi-professionals displayed a greater number of behaviors than the amateurs during the test, which may be due to the speed and rhythm of the game; since one of the factors that best discriminates against players of different levels is the activity carried out at high intensity during the game (Bangsbo et al., 2006).

Roles

The semi-professionals played better than the amateurs from any of the roles, although away from the ball ("Attacker without the ball out of the game center" and "Defender out of game center") were significantly better. It seems that the sociomotor role can be a very interesting criterion to evaluate the performance of the players, since the level of football competence of the players of both groups is perfectly discriminated.

Own action of the sub-roles

"Positioning" in the offensive phase, "Dissuading" and "Relocating" in the defensive phase were the own actions of the sub-roles that more differentiated the professional group from the amateur group. It is true that in these types of actions the influence of the opposition is not as decisive as in actions that take place within the intervention space. For this reason, in no case is it argued that there are no differences in efficiency between a semi-professional and an amateur player, for example "Dribbling", since dribbling is influenced by the rival to whom it is necessary to dribble. What is intended to be said is that the game context in this type of action does not vary, since semi-professionals play with each other, just as amateurs do. This leads us to think that variables focused on the relationship with the ball, widely used to evaluate players, should be judged carefully when comparing players from different divisions and categories; while other variables present in the physical environment, fundamentally present in the relationship with teammates out of the game center, can be analyzed without the great relevance that it supposes against who the player is facing. Based on the findings found, the coaches of amateur football players should focus the feedback during the tasks on the tactical behaviors that occur out of the game center, knowing that in the intervention space there is no space or time to think what to do, and most of behaviors occur intuitively and non-consciously. In this sense, the effectiveness of SSGs as pedagogical tools depends on its multiple configurations (De Paula et al., 2022), so the manipulation of the constraints of the tasks will allow to provoke different effects in the behaviors that the players develop around the ball, adapting them to the demands of the game context.

Operational principles

In general, semi-professional players developed the operational principles of the game more effectively than amateur players. It is interesting to appreciate that amateur players display more tactical behaviors than semi-professionals to "Achieve the goal". This may be due to the fact that in the game context of the semi-professionals there is greater difficulty in creating goal situations. However, semi-professionals are much more efficient, probably due to their quality. In addition, the semi-professionals developed more behaviors than the amateurs to "Progress towards the rival area". This may mean that semi-professionals play with greater verticality and initiative in attack and offer more options during playmaking.

Core/Specific principles

About the core/specific principals, it was observed that in the offensive phase the semi-professionals show more efficiency than the amateurs when developing the principles of "Penetration" and "Width and length". The latter agrees with the findings found in other studies where

higher level players presented better patterns of offensive collective behaviors related to the core/specific principles of width and length (Carvalho et al., 2021). In the defensive phase, the semi-professionals proved to be more effective than the amateurs in developing the principles of "Balance" and "Defensive unity". Both principles refer to movements that allow a better defensive organization of the team, emphasizing the relational dimension, either to create superiority in the game center -Balance-, or to make a smaller field reducing the width and length of the team -Defensive unit-.

General Tactical Behaviors

Specifically, going to the general tactical behaviors, it seems interesting to note that the behaviors "Driving the ball forward" and "Driving the ball backwards, right or left", were performed by semi-professionals with greater volume and efficiency than by amateurs. However, "Driving the ball in the rival area or in front of the last defender" could not be developed during the test by any of the semi-professional players. This may be due precisely to the difference in the game context between the two groups, since the semi-professional game context did not allow driving close to the goal, since the performance of this type of behavior can make it difficult to complete the action.

Another difference found in the game context of both groups was how the semi-professionals offer more support to their attacking teammate with the ball when trying to progress towards the rival area. This could be seen significantly in the tactical behavior "Move giving close option ahead of the ball". In addition, semi-professionals also showed greater effectiveness than amateurs in developing the tactical behaviors "Move away from the ball appearing between rival lines or behind the defense" and "Give amplitude to the attack by positioning in width". This reflects that semi-professional players are more successful than amateurs in finding spaces that facilitate the attacking moves.

Defending in the intervention space, the semi-professionals showed greater effectiveness in preventing opponent's progression through the tactical conduct "Redirect the opponent attack". However, amateurs performed more behaviors and more effectively when it came to "Do not give the opponent a shot option without entering him (avoid possible shot)". This could be because the amateur attacker needs more time and resources to prepare his shot, facilitating the rival defensive action. Out of the intervention space, semi-professionals showed greater effectiveness than amateurs in defensive tactical behaviors: "Move to create superiority in the game center or mark/watch opponents", "Create uncertainty in the last opponent line or reduce the effective playing space" and "Relocation in the last defensive line reducing the effective playing space". In addition, in this last behavior, the semi-professionals carried out a greater number of behaviors than the amateurs. This reflects the importance of transitions in today's football, as a rapid move facilitates defensive organization.

Limitations

In both groups the protocol was carried out in the final part of the training session. Due to this, the physical condition of the players could be a determining factor in the development and effectiveness of the behaviors, especially for the amateur group, a priori, less prepared. Regarding this idea and knowing that the duration of a training drill influences both the amount and intensity of training demands (Fanchini et al., 2011), perhaps it is also necessary to establish a longer pause time between series to guarantee the total recovery of all the players for developing the second serie.

It is also necessary to comment that the protocol was carried out with the particularity of not using the offside rule. The advantage is that there are fewer interruptions and controversial situations during the game. The disadvantage is that the offside rule impacts players 'positional behavior in SSGs, inducing a less exploratory behavior mainly in the width axis (Praça et al., 2021).

It must also be recognized that, although a total of 1377 behaviors were analyzed, studies with much larger samples are needed to allow generalization of the findings. However, anyone knows that the game differences between semi-professionals and amateurs are substantial, and given this heterogeneity, the comparison of these two study groups in detail can contribute in the practical field, providing answers to the intervention of the coaches.

Future lines of research

It has been observed that the players' level affects team performance in different SSGs (Machado et al., 2020; Praça et al., 2018; Silva, Aguiar, et al., 2014; Silva, Duarte, et al., 2014; Silva, Travassos, et al., 2014), so the effects that the protagonists produce in the game context of a task can be very different depending on their football competence, as well as their category or age. This work was carried out with a sample of adult players, so it may be interesting to replicate this study in categories of formative football to show the differences that exist between players with a high and low level of football competence.

Besides, it would be interesting to use FOCOS by modifying the SSG protocol to identify how the game context changes. Some ideas that have been used in other works: Play with the offside rule (Praça et al., 2021), play with touches limitation (Brito e. Sousa et al., 2019), play with more or less players (Barreira et al., 2014), play with jokers (Moniz et al., 2020; Padilha et al., 2017). A greater investment in human, technological and temporal resources is still needed to be able to continue advancing in the detailed knowledge of the effects that this type of tasks have on the behavior of players and teams (Casamichana et al., 2015).

Conclusion

In this study, the football competence shown by a semi-professional group and an amateur group when developing the same protocol (Gk + 4 vs. 4 + Gk SSG) was compared to identify differences in the game context of the tasks. The game context is called in this work as the set of game situations that give rise to the appearance of tactical behaviors that can be observed and analyzed during the SSG. Knowing that, the game context of semi-professional and amateur players differs mainly in the efficiency of the tactical behaviors that take place out of the game center, since the influence of the opposition is not as decisive as in those actions that take place near the intervention space. Therefore, variables centered on the relationship with the ball, widely used to evaluate performance, must be judged carefully when comparing players of different divisions and categories; while other variables that focus on the relationship with teammates out of the game center, can be analyzed without the great relevance that it supposes in relation to who the player is facing. Based on the findings found, during tasks and matches, instead of focusing their feedback on how to dribble, how to pass, or how to shoot under pressure, coaches of amateur football players should be concerned with giving instructions on how to better support teammates when the player is not close to the intervention space, as well as providing guidance on how to make better use of the space, for example, offering greater width and length to the team. That is, coaches should prioritize feedback on those tactical behaviors that occur in a more rational way (fundamentally out of the game center), rather than those behaviors that develop in the heat of the action in a more intuitive way, and without time and space to consciously decide. In this sense, the manipulation of the task constrains will allow to provoke different effects in the behaviors that the players develop around the ball, adapting them to the demands of the game context.

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Data availability statement

The data that support the findings of this study are openly available in data.mendeley.com at https://doi.org/10.17632/494s2mxykt.1

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