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El resultado momentáneo del partido y la ventaja actual cambian la ocupación del espacio y el rendimiento durante el partido de un equipo de fútbol

The momentary result of the match and the current advantage change a football team's space occupation and match running performance

O resultado e a vantagem momentânea da partida modificam a ocupação de espaço e a performance de corrida de uma equipe de futebol

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RESUMEN

Este estudio tuvo como objetivo verificar si el resultado momentáneo del partido y las condiciones de ventaja/desventaja modificarían la ocupación del espacio de juego y el rendimiento de corrida de un equipo de fútbol. En el estudio participó un equipo compuesto por diez jugadores. Los datos posicionales se obtuvieron a través de dispositivos GPS para analizar la ocupación del espacio y el rendimiento de corrida del equipo (Playertek, Catapult). Las coordenadas geográficas (latitud, longitud) se convirtieron en cartesianas (x,y). Se utilizó una interfaz gráfica de usuario desarrollada en el entorno Matlab para analizar la información. Los datos sobre la ocupación del espacio mostraron una tendencia del equipo a presentar mayores valores de longitude (T.E.=0.61) y anchura de superfície (T.E.=0.66) y una menor compactación del equipo (T.E.=0.47) en condiciones de empate y desventaja en comparación con la victoria y ventaja parcial en el enfrentamiento. Además, el equipo cubrió mayores distancias a baja intensidad en una victoria parcial cuando iba por delante en el marcador por segunda vez (2 vs 1) en comparación con la primera (1 vs 0) (T.E.=0.6). En situaciones de empate y derrota parcial, el equipo tendió a ocupar una mayor superficie en el juego, a permanecer menos compacto y a recorrer una mayor distancia a baja intensidad hacia el final del tiempo.

Palabras clave: coordinación, sistema de tracking, status del partido, comportamiento táctico, análisis de rendimiento.

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The momentary result of the match and the current advantage

ABSTRACT

This study aimed to verify whether the momentary result of the match and the advantage/disadvantage conditions would modify the occupation of playing space and the running performance of a football team. A team composed of ten players participated in the study. The positional data was obtained via GPS devices to analyze the space occupation and the team's running performance (Playertek, Catapult). Geographic coordinates (latitude, longitude) were converted into Cartesian (x,y). A graphical user interface developed in the Matlab environment was used to analyze the information. The data regarding space occupation showed a tendency for the team to present higher values of length (E.S.=0.61) and width (E.S.=0.66) of surface area and less compaction of the team (E.S.=0.47) in conditions of draw and disadvantage compared to victory and partial advantage in the confrontation. In addition, the team covered greater distances at low intensity in a partial victory when they were ahead on the scoreboard for the second time (2 vs 1) compared to the first (1 vs 0) (E.S.=0.6). In situations of draw and partial defeat, the team tended to occupy a larger area in the game, remain less compacted, and covered a greater distance at low intensity closer to the end of the half.

Keywords: Coordination, Tracking system, Match status, Tactical behaviour, Performance analysis.

RESUMO

Este estudo teve como objetivo verificar se o resultado momentâneo da partida e as condições de vantagem/desvantagem modificariam a ocupação do espaço de jogo e o desempenho de corrida de uma equipe de futebol. Dez jogadores compuseram a amostra do estudo. Os dados posicionais foram obtidos via dispositivos de GPS para análise da ocupação do espaço e do desempenho de corrida do time (Playertek, Catapult). As coordenadas geográficas (latitude, longitude) foram convertidas em cartesianas (x,y). Uma interface gráfica de usuário desenvolvida no ambiente Matlab foi utilizada para análise das informações. Os dados referentes à ocupação do espaço mostraram uma tendência de o time apresentar maiores valores de comprimento (T.E.=0.61) e largura (T.E.=0.66) de área de superfície e menor compactação (T.E.=0.47) do time em condições de empate e desvantagem em relação à vitória e vantagem parcial no confronto. Além disso, o time percorreu maiores distâncias em baixa intensidade durante a vitória parcial quando estava à frente no placar pela segunda vez (2 x 1) em relação à primeira (1 x 0) (T.E.=0.6). Em situações de empate e derrota parcial, o time tendia a ocupar uma área maior no jogo, ficava menos compactado e percorria uma distância maior em baixa intensidade próximo ao final do tempo.

Palavras chave: Coordenação, Sistema de rastreamento, Status da partida, Comportamento tático, Análise de desempenho.

INTRODUCTION

Positional data brings possibilities for analysis regarding the dynamics of team's space occupation and movements of players and their teams, facilitating the visualization of information especially related to the tactical and physical dimensions (Duarte et al., 2013; Goes et al., 2021). The advent of electronic performance and tracking systems as the global positioning system (GPS) and local positioning system devices (LPS) has allowed researchers and practice professionals to acquire real-time information with numerous video resources, data presentations, among other sources (Castellano et al., 2014; Ravé et al., 2020). In recent years, this technological advancement has caused significant progress in favor of football development worldwide (Low et al., 2020). An evidence for this progress is the possibility of analyzing tactical and physical data in a contextualized way (Forcher et al., 2023; Teixeira et al., 2022).

In the detailed systematic review conducted by Teixeira et al. (2022), the authors emphasized the limited number of studies that have explored team collective organization and physical performance within the game's official rules (10 vs 10 + goalkeepers) using positional data. This review shows that only six investigations considered a formal match (Figueira et al., 2018; Folgado et al., 2015; Gonçalves et al., 2018; Nieto et al., 2024; Praça et al., 2020) of which five of them used this format to analyze data during a competition, except for Nieto et al. (2023). Notably,

the studies by Folgado et al. (2015) and Gonçalves et al. (2018) demonstrate interesting relationships between patterns of interpersonal coordination and the distance covered in different speed ranges, which reveal interesting connections between variables in the tactical and physical dimensions. For instance, Gonçalves et al. (2018) reported increased synchronization at higher speeds during the first half. In contrast, in the second half, synchronization persisted over longer periods at reduced speeds. However, such studies consider the team's behaviour throughout the game (Gonçalves et al., 2014), comparing the first half with the second half (Praça et al., 2020) or even subdividing it into 15-minute periods (Gonçalves et al., 2018), which does not necessarily represent significant periods for analyzing the team's performance in a game environment.

Contextual variables such as match location, quality of the opponent, and the momentary result of the match have been considered factors that influence or are influenced in the final result, the physical demands of the players, and the offensive and defensive aspects of the team (Bradley & Noakes, 2013; Oliveira et al., 2021). Among the variables mentioned, the momentary result allows us to analyze the form in which the team performs during the period when it is winning, drawing, or losing the game (Aquino et al., 2017; Fernandez-Navarro et al., 2018; Lago, 2009). Studies investigating the match's momentary result observed a 3% and 11% drop in ball possession when the teams were tied or had an advantage on the scoreboard, respectively (Lago, 2009; Lago & Martín, 2007). Subsequent investigations showed a tendency for teams to present greater physical demand when they are losing or drawing, in confrontations against strong opponents, in games as a home team, and also when it culminates in a victory (Aquino et al., 2020; Castellano et al., 2011; Lago-Peñas, 2012; Rampinini et al., 2007).

Although changes regarding team dynamics are generally interpreted as changes in game methods in response to the score (Aquino & Vieira, 2021), few studies have considered analyzing how teams occupy the game space according to the momentary result of the match, as well as the influence that each change in the score can have on the organization of the teams. From a running performance perspective, this information appears to be well established (Augusto et al., 2022). However, none of the studies have investigated changes regarding the collective organization of teams caused by momentary changes in the game's score. To our knowledge, the current study is the first investigating nuances of the team's collective organization in relation to contextual changes. In this sense, running performance provides greater contextualization toward understanding the collective organization of the team. The adequacy of collective adjustments promoted by contextual changes can also be informative of team adaptability in specific situations where the team is missing important players or is being surprised by high performance from the opponent, or even in the final stages of a championship. In these different contexts, significant changes can occur and, consequently, modify the team's behaviour patterns.

Therefore, the present study aimed to verify whether the momentary result of the match or the condition of advantage and disadvantage could modify a team's space occupation and running performance. We expect that the team remains more compact, occupying a reduced area on the playing field and covering shorter distances in different speed ranges, as well as presenting a reduced number of accelerations and decelerations in conditions of momentary victory or advantage of the match.

METHODS

Study design

An observational, comparative, and retrospective design was considered to analyze the influence of different moments of the match on the running performance and space occupation of the under-17 reference team. In the study, we compared physical and tactical variables according to the momentary result of the match, and in moments of advantage and disadvantage.

Sample

A total of ten U-17 football players (16.56 ± 00.64 years) were monitored during two matches. The team was competing in the semifinal stage of the state championship (Rio Grande do Sul, Brazil), held in two games, home and away. The team practised five times a week with sessions lasting approximately 120 minutes, plus an official

or friendly game during the weekends. The competition regulations stipulated the match with two 40-minute halves. Due to the occurrence of goals only in the first half of both matches and the circumstance of substitutions made by the teams, data analysis was conducted only in the first half of each game. The analyses were stratified into 60-second intervals, totalling 39 and 42 observation units, first and second game, respectively. The time between the occurrence of a goal and the restart of the game was not considered, as the displacement of teams characterizes this moment due to the return to the initial position of the match.

According to the tournament rules, the team with the superior campaign in the knockout stages would benefit from the advantage of a tie in the aggregate score across the two games. The observed team reached this stage of the competition, having a worse campaign than its opponent, hence starting the tie with a theoretical disadvantage despite the initial 0-0 scoreline. This reasoning was followed to interpret contextual advantages and disadvantages according to the occurrence of goals in the match. More specifically, the analysis regarding the advantage (n=20) and disadvantage (n=61) conditions in the games considered the sum of observation units from the first half of the two games in the semifinal stage, totalling 81 observations. Only the first half of the first game was considered for the observation regarding the momentary result, with 39 observations. The game scores were: 0 vs. 0 (n=6), 1 vs. 0 (n=18), 1 vs. 1 (n=6) and 2 vs. 1 (n=9).

This research was approved by the Human Research Ethics Committee (CAAE: 70049717.0.0000.5153) and met the standards established by the resolution of the National Health Council (466/2012) and the Helsinki Ethics Treaty (WMA, 2000; Bošnjak, 2001; Tyebkhan, 2003). Data collection was carried out with the consent of those responsible for the club. The players and their legal guardians signed an Assent and Informed Consent Form following local legislation. This research was carried out in accordance with the Ethical Standards in Research in Sports and Exercise Sciences (Harriss, MacSween and Atkinson, 2019). Importantly, the study was carried out in accordance with Organic Law 3/2018, of December 5, on the Protection of Personal Data and the guarantee of digital rights.

Instruments and procedures

During matches, players used wearable devices technology, integrated with a 400 Hz Tri-Axial accelerometer and 10 Hz Tri-Axial magnetometer (Playertek, Catapult Innovations, Australia). Although goalkeepers participated in data collection, they were not included in the data analysis stage due to the position-specific characteristics of their movements on the playing field.

After the games, the files with geolocation information were exported through the manufacturer's website and then taken to the Matlab® environment (The MathWorks Inc., Natick, USA). Geographic coordinates (latitude and longitude) were converted into Cartesian coordinates (x and y, respectively) and smoothed by a third-order Butterworth (cutoff frequency 0.3 Hz). A graphical user interface developed in a Matlab® environment was used to analyze the information. Seven linear variables previously established in the literature (Clemente et al., 2018) were selected and calculated in this interface. Such variables provide information on collective dynamic properties, especially related to the team's center of gravity and dispersion (Araújo et al., 2015; Araújo & Davids, 2016). The measures reflect the distance between defenders, midfielders and attackers, the team's area of occupation and its compactness, length and width measurements, and the team's collective spatial exploration. These measures are briefly described below.

- Distance between sectors: To obtain the distance between sectors (defense, midfield, and attack), the centroid of each sector was found, and subsequently, the Euclidean distance between sectors was calculated;
- Length: Corresponded to the distance between two horizontal defense lines, aligned parallel to the goal lines;
- Width: The two vertical lines, which ran parallel to the sidelines, determined the team's width. It was defined as the distance that separates the rightmost player from the leftmost player on the field;
- LpW ratio: Measure of team depth in relation to its width;

- Surface area: Calculated as the area of a polygon drawing by linking the externally positioned players of a team;
- Stretch index: Average distance of all teammates to the team's centroid;
- Space exploration index: Calculation of the differences between the average position and the absolute position of the player at each instant of time.

The variables related to the match running performance considered were total distance covered (m), sprint distance (m), distance covered between 0 and 7 $km.h^{-1}$ (m), distance covered between 7.1 and 15 $km.h^{-1}$ (m), distance covered between 15.1 and 20 $km.h^{-1}$ (m), distance covered between 20.1 and 25 $km.h^{-1}$ (m), and distance covered above 25 $km.h^{-1}$ (m), number of accelerations above 2 and 3 $m \cdot s^{-2}$, number of decelerations above 2 and 3 $m \cdot s^{-2}$ — where $m \cdot s^{-2}$ refers to the rate of change in velocity per second (e.g., 2 $m \cdot s^{-2}$ indicates that the athlete's speed increases by 2 meters per second every second).

Data analysis

Descriptive analysis (mean, median, deviation, and standard error) was performed to obtain general information about the sample. The normality of data distribution was tested using the Kolmogorov-Smirnov and Shapiro-Wilk test. To analyze the dynamics of teams' space occupation and the match running performance in conditions of advantage and disadvantage, we used the paired t-test for independent samples, and the Mann-Whitney test was used. In order to compare the data between the momentary results of the match, one-way ANOVA and the Kruskal-Wallis test were used. For the effect size between comparisons, Cohen's d was used, considering the classifications: very small (0-0.19), small (0.20-0.49), medium (0.50-0.69), and large (>0.80) (Cohen, 1988). The significance level adopted was $p < 0.05$. The SPSS (Statistical Package for Social Science) software for Windows, version 29.0, was used to process the data.

RESULTADOS

The data shows that changes in the result throughout the match had an effect on the team's collective dynamics in variables that represent space occupation, such as the distance between the defense and attack sectors ($F(3.35) = 4.614$; $p = 0.008$), surface area ($F(3.35) = 2.957$; $p = 0.046$), width ($F(3.35) = 3.031$; $p = 0.042$), and in indices that characterize the team compression, the case of the Stretch index ($x2(3) = 9.503$; $p = 0.023$). Bonferroni's complementary post hoc analyses carried out to discover in which momentary results differences could be identified showed that the distance between the defense and attack sectors ($p = 0.008$), surface area ($p = 0.043$), width ($p = 0.034$), and Stretch Index ($p = 0.013$), decreased while the team was ahead on the scoreboard for the second time (2 vs 1) when compared to the partial draw (1 vs 1).

Of the running performance variables, a general effect of the momentary result was observed only on the distance covered at speeds between 0 and 7 km.h-1 ($F(3,35) = 4.945$; $p = 0.006$; E.S.=0.6) and between the partial victory scores (1 vs. 0 and 2 vs. 1). On average, the team covered greater distances at low intensity when they won the match for the second time.

Table 1
Team space occupation in different momentary results of the match.

Variables	0 vs 0 (mean, SD, and CI)	1 vs 0 (mean, SD, and CI)	1 vs 1 (mean, SD, and CI)	2 vs 1 (mean, SD, and CI)	*p*
Distance between Def and Mid (m)	11.9±3.2 (8.5-15.3)	9.4±3.3 (7.7-11.1)	10.±2.4 (7.6-12.6)	9.02±2.7 (6.9-11.1)	0.179
Distance between Mid and For (m)	11.9±5.5 (6.1-17.8)	14.6±5.5 (11.8-17.4)	17.2±4.1 (12.9-21.5)	10.7±5.4 (7.2 14.2)	0.089
Distance between Def and For (m)**	23.3±2.8 (20.3-26.2)	20.2±6.1 (17.2-23.3)	26.7±3.9 (22.6-30.8)	17.3±4.3 (14-20.6)	0.008
Length (m)	40.3±6.1 (33.8-46.7)	39.8±5.1 (37.3-42.4)	43.1±3.3 (39.5-46.6)	35.8±4.9 (32-39.7)	0.064
Width (m)*	38.1±6 (33.5-42.8)	37.01±5 (34.9-39.1)	41.3±4.2 (36.2-46.4)	33.5±4.8 (28.5-38.6)	0.042
Lpw ratio (AU)	1.06±0.09 (0.97-1.17)	1.07±0.11 (1.05-1.17)	1.04±0.05 (1-1.11)	1.07±0.37 (0.86-1.44)	0.829
Surface area (m^2)*	901±236 (653-1150)	816±206 (714-919)	1059±256 (790-1329)	724±225 (550-897)	0.046
Stretch index (m)*	15.2±1.9 (13.2-17.3)	14.6±2.1 (13.6-15.7)	16.9±1.9 (14.8-19)	13.5±2.2 (11.7-15.2)	0.023
Spatial exploration index (m)	11.2±2.9 (8.1-14.2)	11.1±4.8 (8.7-13.5)	11.2±4 (7-15.4)	13.1±2.8 (11-15.3)	0.629

*p-value<0,05; **p-value<0,01; all differences happen between 1 vs 1 and 2 vs 1 score.

The momentary result of the match and the current advantage

Table 2
Team match running performance in different momentary match results.

Variables	0x0 (mean, SD, and CI)	1x0 (mean, SD, and CI)	1x1 (mean, SD, and CI)	2x1 (mean, SD, and CI)	*p*
Total distance (m)	1310.3±76.2 (1230-1390,2)	1044±400.5 (851-1237)	1157.7±177.7 (971.2-1344.3)	1111.87±147.55 (998.4-1225.3)	0.31
0-7 km·h^{-1} (m)**	402.5±31.5 (369.5-435.6)	401.3±51 (376.7-425.9)	465.8±69.2 (393.2-538.48)	483.9±83.3 (419.8-547.9)	0.006
7.1-15 km·h^{-1} (m)	660.6±74.8 (582-739.2)	416.6±257.9 (292.3-540.9)	490±182.3 (298.7-681.3)	456.3±107.6 (373.6-539)	0.101
15.1-20 km·h^{-1} (m)	162.6±35.4 (125.4-199.8)	148.8±125.2 (88.1-208.8)	138.3±64.2 (70.8-205.7)	118.1±61.9 (70.5-165.7)	0.823
20.1-25 km·h^{-1} (m)	66.4±37.2 (27.4-105.5)	59.2±55.3 (32.5-85.8)	53.3±21.9 (30.3-76.4)	38.9±26.7 (18.3-59.5)	0.711
Above 25.1 km·h^{-1} (m)	17.9±18.2 (1.2-37)	18.4±24.3 (6.7-30.1)	10.1±7.8 (1.8-18.4)	14.6±18.2 (0.6-28.6)	0.958
Distance sprinting (m)	84.4±52.6 (29.2-139.5)	77.6±74.1 (41.9-113.3)	63.5±22.2 (40.2-86.9)	53.6±43.3 (20.3-86.8)	0.8
Top speed (km·h^{-1})	20.6±1.07 (19.5-21.7)	17.2±6.2 (14.2-20.2)	19.5±1.9 (17.41-2.5)	18.7±2.3 (16.9-20.5)	0.421
Accelerations > 2 m·s^{-2}	33±2 (30-35)	22±15 (14-29)	23±7 (15-31)	25±4 (22-28)	0.281
Accelerations > 3 m·s^{-2}	11±5 (6-17)	8±7 (5-12)	9±2 (6-11)	9±2 (8-11)	0.759
Decelerations < 2 m·s^{-2}	28±5 (22-34)	18±15 (11-25)	24±12 (11-37)	24±5 (20-28)	0.277
Decelerations < 3 m·s^{-2}	12±2 (10-15)	9±7 (5-12)	10±5 (5-16)	10±2 (8-12)	0.544

*p-value<0.05; **p-value<0.01

Regarding the comparisons between the advantage and disadvantage conditions in both semifinal games, higher distance values were observed between the defense and midfield sectors (t(78) = 2.433; p = 0.018; E.S. = 0. 51; CI: -1.02 and 0), between the defense and attack sectors (t(78) = 2.673; p = 0.009; E.S. = 0.62; CI: -1.21 and -0.17), surface area (t(78) = 2.076; p = 0.041; E.S. = 0.54; CI: -1.05 and -0.02), width (t(78) = 2.354; p = 0.021; E.S. = 0.61; CI: -1.12 and -0.09), length (t(78) = 2.553; p = 0.013; E.S. = 0.66; CI: -1.18 and -0.14), and Stretch index (U = 412.00; p = 0.037; E.S. = 0.47). In these comparisons, no statistical differences were found in the running profile variables (p > 0.05).

Table 3
Comparison of team space occupation between disadvantageous and advantageous conditions.

Variables	Disadvantage (mean, SD, and CI)	Advantage (mean, SD, and CI)	*p*	*d*
Distance between Def and Mid (m)*	11.4±2.6 (10.1-12.6)	9.4±4.1 (8.3- 10.5)	0.018	0.51
Distance between Mid and For (m)	13.5±4.7 (11.3-15.8)	12.5±5.3 (11.1-13.8)	0.439	0.2
Distance between Def and For (m)*	23.4±5.6 (20.7-25.9)	19.9±5.4 (18.2-20)	0.013	0.62
Length (m)*	41.1±3.3 (38.9-43.2)	37.4±5.4 (35.9-38.9)	0.013	0.66
Width (m)*	38.5±4.8 (36.3-40.8)	35.03±6.04 (33.4-36.6)	0.021	0.61
Lpw ratio (AU)	1.06±0.7 (1-1.07)	1.03±0.19 (0.98 – 1.08)	0.43	0.02
Surface area (m^2)*	954.6±204.3 (859-1050)	829.5±242.2 (766-892)	0.041	0.54
Stretch index (m)*	15.9±1.7 (15.1-16.7)	14.6±2.5 (13.9-15.3)	0.037	0.55
Spatial exploration index (m)	11.1±3.1 (9.6-12.6)	12.4±3.9 (11.4- 13.4)	0.093	0.35

*p-value<0.05; **p-value<0.01

Finally, we analyzed the tactical variables based on the momentary results of a draw in the competition's conditions of advantage and disadvantage in the semifinal phase. The results showed differences between the distance between the defense and attack sectors (t = 3.122; p = 0.003), width (t = 2.678; p = 0.01), length (t = 2.609; p = 0.012), and the ratio width/depth (t = 2.614; p = 0.012).

Table 4
Comparison of team space occupation between draw in disadvantageous and advantageous conditions.

Variables	Draw in disadvantage (mean, SD, and CI)	Draw in advantage (mean, SD, and CI)	*p*	*d*
Distance between Def and Mid (m)	11.03±2.87 (9.2-12.85)	9.59±4.79 (9.59-7.89)	0.336	0.33
Distance between Mid and For (m)	14.59±5.39 (11.1-18.02)	11.82±5.1 (10.01-13.63)	0.120	0.53
Distance between Def and For (m)**	25±3.72 (22.63-27.37)	19.87±5.21 (18.02-21.72)	0.003	1.05
Length (m)*	41.71±4.94 (38.57-44.86)	36.5±6.23 (34.29-38.71)	0.012	0.88
Width (m)*	39.68±5.17 (36.39-42.97)	38.73±6.07 (36.39-42.97)	0.596	0.90
Lpw ratio (AU)*	1.06±0.07 (1.01-1.11)	0.94±0.13 (0.91-1)	0.012	0.88
Surface area (m^2)	980±249 (822-1139)	865±261 (772-957)	0.191	0.45
Stretch index (m)	16.09±2.06 (14.78-17.4)	14.9±2.77 (13.93-15.9)	0.188	0.45
Spatial exploration index (m)	11.2±3.32 (9.09-13.3)	12.94±3.51 (11.69-14.18)	0.145	0.5

*p-value<0.05; **p-value<0.01

DISCUSSION

The aim of this study was to verify whether the momentary result of the match or the condition of advantage and disadvantage on the scoreboard could modify the team's space occupation and the running performance of a football team in U-17 championship semifinal matches. The main results regarding space occupation showed congruence between the objectives of the study since there was a tendency for the team to present higher values of length and width of surface area, as well as less compaction of the team in conditions of draw and disadvantage when compared to victory and partial advantage in the match. In addition, the team covered greater distances at low intensity when they were ahead on the scoreboard for the second time (2 vs 1) compared to the first (1 vs 0).

Few investigations have considered the complementary characteristics that tactical and physical aspects can provide to football (Carling, 2013; Davids et al., 1994). In our research, we aimed to adopt an integrative approach to positional data to comprehend better the dynamics of different match situations and the associated spatial strategies employed by teams (Bradley & Ade, 2018; Teixeira et al., 2022). To interpret our findings accurately, it is important to contextualize the competitive environment underpinning the analyses. Firstly, it is necessary to consider that the analysis of the momentary score of the match only took place in the first half of the first semifinal game. Secondly, when examining the results of the comparisons between the advantage and disadvantage conditions, the first half of both matches was considered, just as in the comparisons between situations of draw, sometimes with an advantage, sometimes with a disadvantage, in both matches of the semifinal stage. It is also worth considering that the team analyzed started the first game of the semifinal stage at a disadvantage, as it had won fewer points in the previous stages of the competition.

It was observed that this team presented similar spatial organization patterns in situations of partial draw in the first game and disadvantage conditions in both games. These presented patterns refer to the superior values of distance between the centroids of the team sectors, surface area, and team length and width, showing that unfavourable conditions led players to distance themselves from each other and, consequently, showed higher surface area. The team adopted this organizational pattern to guarantee the initiative in the game interactions, putting pressure on the opponent to score the goal and obtain an immediate advantage. This argument is based on the results of investigations that clearly show this standard behaviour in teams that are looking for an advantage on the scoreboard, which especially characterizes the offensive phase of the game (Bartlett et al., 2012; Clemente et al., 2013a, 2013b; Moura et al., 2012).

Under these same conditions, data from the running performance shows that players covered greater distances at low intensity (between 0 and 7 km.h-1) in the second momentary result of partial victory (2 vs. 1) when compared to the first (1 vs. 0). Particularly, the fact of obtaining an advantage near the end of the first half (the goal occurred in the 32nd minute) may suggest that the players had slowed down the game and waited for "time to pass" in order to assimilate the momentary advantage on the scoreboard, reducing the team's exposure to risk. On the other hand, this finding can also be understood as a consequence of the deleterious effects of fatigue throughout the game (Bradley & Noakes, 2013; Gonçalves et al., 2018; Paul et al., 2015). Although they were not statistically significant, it is possible to identify in the speed ranges between 7 and 25 km km.h^{-1} mean values of distance covered that decrease from the beginning to the end of the time, similar to what was found in other studies (Mohr et al., 2003). In addition, it is clear that in conditions of advantage, the team covers less distance in all speed ranges, even reaches a lower peak speed, and presents a reduced number of accelerations and decelerations at low and high intensities.

Regarding the occupation of the game space, Errekagorri et al. (2023) analyzed eight official games of a women's team in the Spanish second division. Comparisons of repeated measures, subdivided into 15 minutes, showed no statistical differences in the tactical variables of length, width, surface area, and team height (distance between the last defender and the goal itself). Although the authors justified stratifying the analyses for 15 minutes, they were based on traditional studies with a unidimensional characteristic emphasizing the physical dimension. Possibly, this

was one of the reasons why no changes were identified in the collective organization of the team throughout the games, which highlights the importance of contextualization in the analyses. Instead, we propose to establish observations based on more representative contexts in competition, considering the score of the match or standing and advantage or disadvantage in the confrontation.

Regarding the contextualization of data, several studies have advanced in recent years and allowed practice professionals to have information about the influence of match location, the quality of the opponent, and the momentary and final result of the match on the team's performance (Aquino et al., 2020; Augusto et al., 2023). In short, this evidence indicates that playing as a home team, as well as playing against qualified opponents and drawing or losing, suggests high physical demand in matches (Aquino et al., 2020; Castellano et al., 2011; Lago-Peñas, 2012; Rampinini et al., 2007). Specifically, it is observed that longitudinal investigations have gained prestige in high-impact journals, especially through the analysis of internal and external loads, emphasizing physical aspects (Aquino et al., 2022). Despite the extensive use of positional data in these studies, there remains an underexplored area concerning the granularity of insights this data can provide to coaching staff and players (Teixeira et al., 2022). It happens, especially concerning interpretations involving tactical and physical aspects in official games and the feasibility of this analysis being carried out at specific moments. Exploiting this potential could yield valuable contextual parameters about team organization, especially during critical game phases, and offer nuanced information to aid the complex task of converting these insights into actionable training interventions. Within this subject, another point worth reflecting on concerns the contextualization of the analyses. As mentioned above, the contextual variables influence the dynamics of space occupation and race profile, contributing to understanding the team's performance. However, context-specific variables can bring even more detail about the circumstances of a game, depending on the team's objectives, vulnerabilities, and strengths. In the present study, for example, we observed different team dynamics based on tactical variables, showing that even in situations of a draw, but in conditions of advantage and disadvantage in the semifinal phase, the team's behaviours showed significant differences related to the width/depth ratio of the team. These results showed that the momentary draw at a disadvantage provoked a more aggressive and direct style from the team in search of the goal. Future investigations may benefit from analysis at specific moments of the competition.

Regarding the collective organization of the team, a recent systematic review carried out by Rico-González et al. (2022) provides values for collective tactical space occupation variables that can serve as a reference for coaching staff to evaluate the collective organization of teams in a game and training environment. It is necessary to recognize the merit and validity of these data and, on the other hand, be cautious when adopting practical measures based only on these references in a training environment, as they come from possibly different contexts and cultures. In particular, two investigations provide important insights into using spatial references with data from competitive games to provide greater support and specificity to training prescriptions (de Souza et al., 2018; Frádua et al., 2013). For instance, in a study carried out with Brazilian professional players, De Souza et al. (2018) found that the most recurrent spatial characteristics of offensive sequences showed a larger area of occupation in the lateral direction (y-axis) compared to the goal-to-goal direction (x-axis), also identifying the numerical superiority of defensive players. More specifically, Frádua et al. (2013) observed that positioning the ball in midfield zones induced teams to occupy the space in the shape of a rectangle with greater amplitude (y-axis) and proportionally to the distance of the ball from the central zones; this figure became more flattened (x-axis). Such characteristics differ from traditional approaches to small-sided games and must be considered since considering full game situations require specific practice exercises to enhance team performance.

The inferences made in this study have important limitations. A main limitation is considering the occupation of playing space and the running performance throughout the game without discriminating between the offensive and defensive phases. Differentiating the time intervals in which the team has (or not) the ball, considering the momentary result of the match, could bring new and applicable knowledge. Another limitation is that we only examined one team in the matches. This reduces, for example, understanding how close the teams are at a given moment in the game as well as the dynamics of the synchronizations inter and intra-teams and their influence on the effectiveness of team actions.

The momentary result of the match and the current advantage

In conclusion, our data allows us to infer how the momentary result of the game, as the condition of advantage or disadvantage, modified the dynamics of the team's space occupation. In situations of draw and partial defeat (disadvantage), the team tended to occupy a larger area in the game, remain less compacted, and cover a greater distance at low intensity closer to the end of the stage.

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