MATCH PEAK SPEED ACROSS A SOCCER SEASON: THE INFLUENCE OF PLAYING POSITION, COMPETITION, MATCH OUTCOME, AND MATCH LOCATION

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Abstract:

This study compared match peak speeds (MPS) across a full season considering different playing positions, competitions, match outcomes, and match locations. Thirty-one elite male soccer players were monitored during matches using global navigation satellite system devices. Independent mean differences [95% confidence intervals] were calculated for the investigated variable (MPS). Fullbacks reached higher MPS than central defenders (CD) (*d*=0.78 [0.56, 1.00]), central midfielders (CM) (*d*=-0.75 [-0.93, -0.57]) and forwards (*d*=-0.32 [-0.55, -0.08]); wide midfielders reached higher MPS than CD (*d*=0.66 [0.43, 0.90]) and CM (*d*=0.64 [0.45, 0.84]); and forwards reached higher MPS than CD (*d*=0.46 [0.22, 0.71]) and CM (*d*=0.41 [0.21, 0.62]). Higher MPS were reached during the National League than the National Cup (*d*=-0.38 [-0.58, -0.19]) and the Supercup (*d*=-0.57 [-1.09, -0.06]); higher MPS were reached during the State Cup than the National Cup (*d*=-0.32 [-0.55, -0.09]) and the Supercup (*d*=-0.57 [-1.12, -0.05]); and higher MPS were reached during the International Cup than the National Cup (*d*=0.26 [0.04, 0.48]). Higher MPS were reached during matches lost than won (*d*=0.19 [0.03, 0.35]). Playing position was the highest differentiator of MPS across a soccer season, underlining the importance of players' individualization when assessing MPS or when calculating normalized speed thresholds. MPS can also vary between competitions, especially if teams face lower division teams.

Keywords*: contextual factors, football, outcome, sprint, velocity*

Introduction

Soccer match performance is usually assessed using various variables, such as global positioning system (GPS) data, including total distance, high-intensity and sprint distances, as well as acceleration and deceleration, each providing information on different aspects of locomotor performance. Among these variables, high-speed movements are increasingly receiving attention from both practitioners and researchers (Gualtieri, Rampinini, Dello Iacono, & Beato, 2023). First, high-speed movements might create goal-scoring opportunities (Faude, Koch, & Meyer, 2012) and second, these efforts might place players at higher risk of muscle injuries (Gregson, et al., 2020). To measure these efforts, practitioners usually apply absolute and arbitrary thresholds disregarding player's individuality (Sweeting, Cormack, Morgan, & Aughey, 2017). That is, when a player surpasses a specific threshold (such as > 25.2 km/h), practitioners usually assess the load as the number of actions, or the distance covered above that threshold (Gualtieri, et al., 2023). This strategy is replicated for all players, regardless of their different capacities.

To address this issue, authors have proposed relative thresholds (i.e., distance covered above a pre-established threshold, which refers to a percentage of the individual maximal effort), by considering players' maximum speeds obtained in field conditions (Gualtieri, Rampinini, Sassi, & Beato, 2020; Hennessy & Jeffreys, 2018). Briefly, practitioners can choose to classify efforts based on

the maximum speed obtained during standardized field sprint (Hennessy & Jeffreys, 2018), or based on the match peak speed (Gualtieri, et al., 2020). The first strategy can raise one additional concern since players rarely replicate the maximal field tests' speeds during matches (Buchheit, Simpson, Hader, & Lacome, 2021). However, using match peak speed as reference to calculate a normalized threshold (calculated as a percentage of the individual match peak speed) raises the question regarding intra-individual and inter-match variability. For instance, while the match peak speed appears to remain stable across a full season (1.5% between-match, 2.8% between-player, 3.0% between-position, and 4.9% within-player) (Oliva-Lozano, Muyor, Fortes, & McLaren, 2021), previous research has highlighted differences between playing positions, with wide positions and forwards reaching higher speeds (Aquino, et al., 2017).

Of note, across a soccer season, players face different contextual variations which can influence the measured load. For example, previous studies have reported that players differ their intense displacements according to the match outcome and location (Chmura, et al., 2018; Morgans, et al., 2025; Nobari, Banoocy, Oliveira, & Pérez-Gómez, 2021). However, higher distances during won matches may be covered with ball possession, while teams that are losing may cover higher distances at high speeds without ball possession, in an attempt to recover from the negative result (Trewin, Meylan, Varley, & Cronin, 2017). Importantly, these reported differences between contexts use absolute and arbitrary thresholds which can limit the individualization (Gualtieri, et al., 2023). Therefore, if practitioners apply normalized thresholds with the match peak speed as the reference value, different findings may arise. For instance, one study has recently reported no significant differences in match peak speed while comparing the same players in different competitions (Freire, et al., 2022). Increasingly, previous research reported that external midfielders (30.4±2.3 km/h), forwards (30.4±3.7 km/h), and external defenders (29.9±2.2 km/h) reached higher match peak speed than central defenders (27.1±3.2 km/h) and central midfielders (26.8±4.0 km/h) (Aquino, et al., 2017). By knowing what contextual factors may impact the expression of the match peak speed, practitioners can therefore consider if applying the match peak speed as a reference to classify high-speed efforts intensity is indeed adequate. Therefore, this study has two main objectives: a) to analyze intra-individual and inter-match variability in peak match speeds across a full season, considering players' positions in relation to the type of competition, match outcome, and match location; and b) to compare differences in peak match speeds based on these same contextual factors.

Methods

Participants

From an initial sample of forty-four (n=44) male players, thirty-one (n=31) elite players (McKay, et al., 2022) were selected to participate in this study. As for inclusion criteria, a minimum of five matches and playing at least 10 minutes per match were required. These inclusion criteria were established to avoid the inclusion of sporadic participation of young players in the senior team (minimum of five matches), and to exclude short match-participations that can limit the opportunity of players to reach higher speeds (≥ 10 minutes). Goalkeepers were excluded due to the particularities of their position. Mean ± standard deviation (M±SD) age, body height and weight was 27.6±5.2 years, 180.5±6.2 cm, and 74.6±6.7 kg, respectively. Players were divided by their playing position as central defenders (CD; n=6), fullbacks (FB; n=6), central midfielders (CM; n=11), wide midfielders (WM; n=5), and forwards (FW; n=3). From the 77 matches disputed by the team, participants participation ranged from 5 to 59 matches, with M±SD of 31.9±15.9. An *a priori* analysis was conducted with G*Power 3.1, requiring a minimum of 400 observations. From the retrieved files, 989 observations (match peak speeds) were considered. Total observations were 989 files. Ethics Committee clearance was obtained (35/2021) and the study was conducted in accordance with the Declaration of Helsinki.

Procedures

One top-level Brazilian team was monitored during the full 2022 season, from January to November. During this period, the club competed in five competitions: the State Cup (Carioca), the National League (Brasileirão), the National Cup (Copa do Brazil), the National Supercup (Supercopa do Brazil), and an International Cup (Libertadores da América). Across the season, all players were monitored with a 10 Hz global positioning system (WIMU PRO™ – Realtrack Systems) that encompassed a double constellation system (Global navigation satellite system [GNSS] and global positioning system [GPS]) and included triaxial high-resolution accelerometers (1,000 Hz), as a standard procedure. This device was certified by Federation Internationale de Football Association (FIFA) (Certification number: 1004497) and previously considered valid (Gómez-Carmona, Bastida-Castillo, García-Rubio, Ibáñez, & Pino-Ortega, 2019) and reliable for sprint monitoring (intra-class correlation coefficient [ICC]: 0.935) (Bastida Castillo, Gómez Carmona, De la Cruz Sánchez, & Pino Ortega, 2018). Devices (dimensions: 81x45x16 mm) were secured between the upper scapulae, at approximately the T3-T4 junction in a pocket of a specific chest vest and were activated 15 minutes

before use, in accordance with the manufacturer's instructions. To avoid interunit errors, each player used the same WIMU device throughout the data collection period. Match data were retrieved from the GPS software (WIMU SPRO) as speed (km/h), with the match peak speeds being selected as the highest speed achieved for each player and during each match.

Four variables were selected to investigate potential differences in match peak speeds: differences between playing positions (CD, FB, CM, WM, FW), differences between competitions disputed by the team (National League [matches: n = 33; observations: n = 474], State Cup [matches: n = 12; observations: n = 139], National Cup [matches: n = 10; observations: n = 139], Supercup [matches: n = 1; observations: n = 15], and International Cup [matches: n = 13; observations: n = 190]), differences between matches outcomes (wins [matches: n = 42; observations: n = 608], draws [matches: n = 13; observations: n = 187] or losses [matches: n = 14; observations: n = 194]), and differences between match locations (home [matches: n = 35; observations: n = 504], neutral [matches: n = 3; observations: n = 43] or away [matches: n = 31; observations: n = 442]).

Statistical analysis

All analyses were performed with Microsoft Excel (Microsoft Corporation; Version 16.68) and jamovi (The jamovi project, 2022, version 2.3). Means ± SDs were calculated for each variable, considering the possible contexts or playing positions. For example, match peak speed means ± SDs were calculated for wins, draws and losses, within the match outcome variable. Additionally, coefficients of variance (CV) were calculated individually for all players (intra-individually), and for all variables (playing position, competition, match outcome, and match location) by using the formula:

Coefficient of Variation = (SD / Mean) * 100.

Potential differences within each variable (playing position, competition, match outcome, and match location) were estimated with an independent groups design (Cumming & Calin-Jageman, 2016), using independent mean differences with 95% confidence intervals. Here, the match peak speed was categorized as the dependent variable while the grouping variable was used for each variable. Cohen's d with 95% CI was established as trivial (<0.2), small (0.2<0.6), moderate (0.6<1.2), large (1.2<2.0), very large (2.0<4.0), extremely large (>4.0), and unclear (when CI crossed both positive and negative values; p>.05) (Batterham & Hopkins, 2006). Significance was established at p<.05.

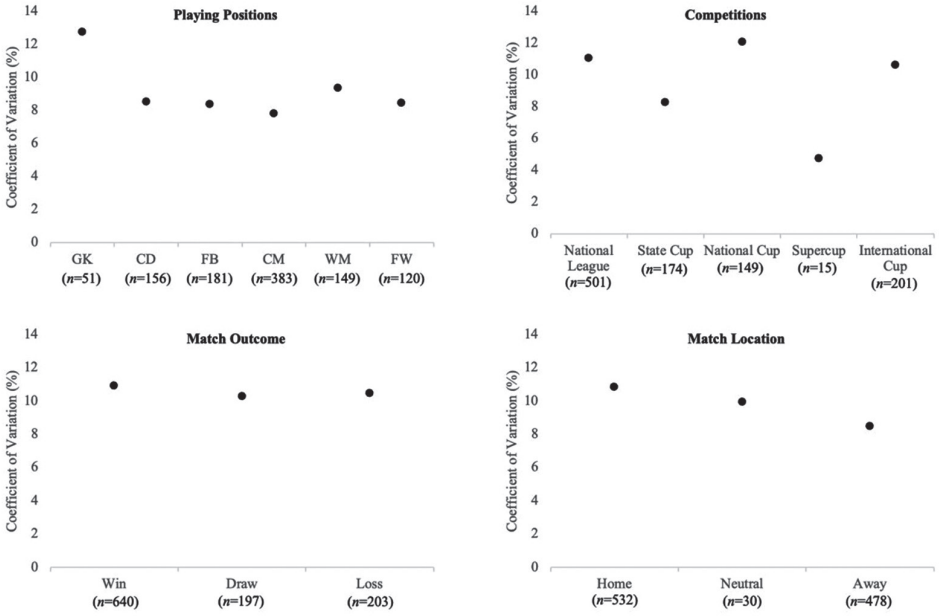
Results

In Table 1, M±SD of match peak speeds are presented, according to the specific variable (playing position, competition, match outcome, and match location). Intra-individual CV ranged from 4 to 12% (Figure 1). Comparisons of the achieved match peak speeds within each variable presented clear differences (p<.05), which are presented in Table 2, and represented—with the effect sizes of the differences—in Figure 2. Except for match location, differences were found in all the variables. Specifically, regarding playing positions, FB reached higher match peak speeds than CD (d=0.78 [0.56, 1.00], moderate effect size, p<.001), CM (d=-0.75 [-0.93, -0.57], moderate effect size, p<.001) and FW (d=-0.32 [-0.55, -0.08], small effect size, p=.008); WM reached higher match peak speeds than CD (d=0.66 [0.43, 0.90], moderate effect size, p<.001) and CM (d=0.64 [0.45, 0.84], moderate effect size, p<.001); and FW reached higher match peak speeds than CD (d=0.46 [0.22, 0.71], small effect size, p<.001) and CM (d=0.41 [0.21, 0.62], small effect size, p<.001). Regarding competitions,

Table 1. Match peak speeds (km/h) according to the analyzed variables (playing position, competition, match outcome, and match location)

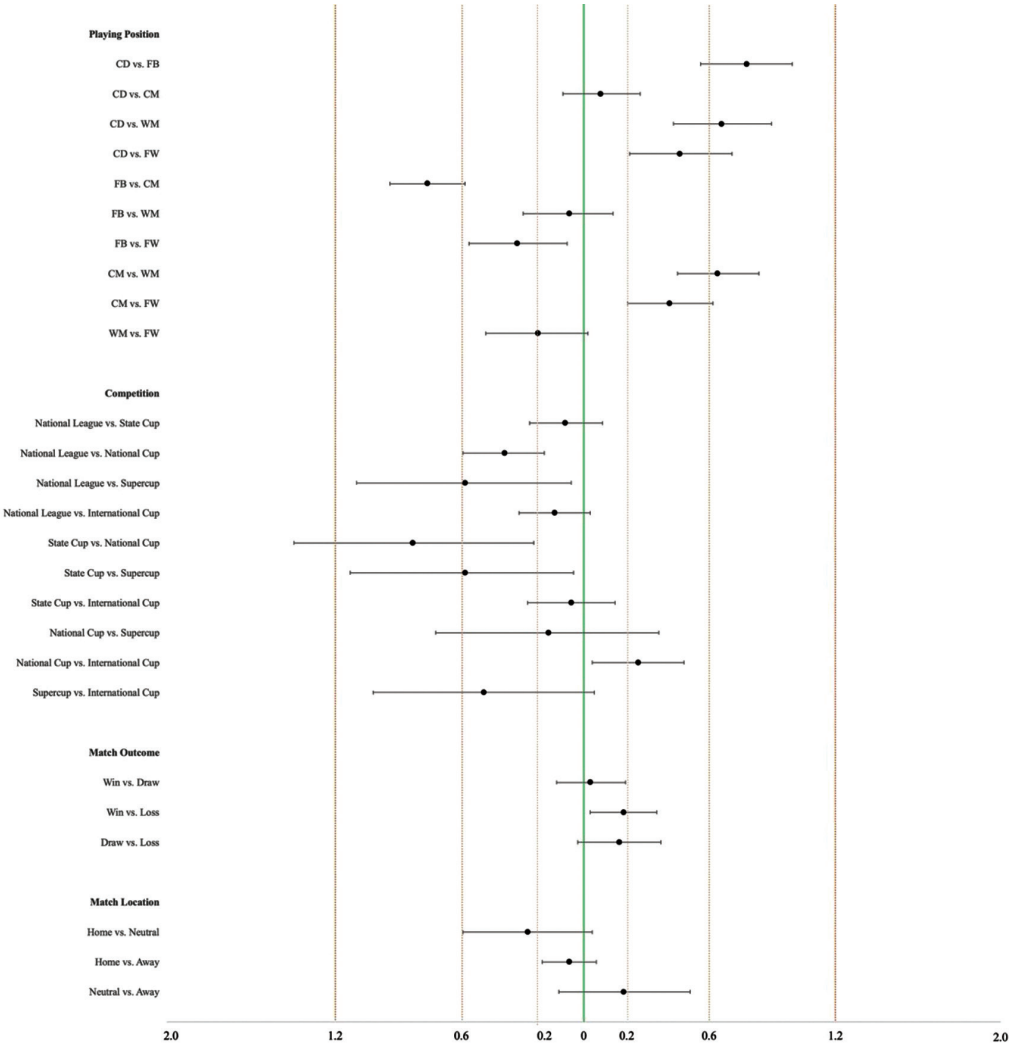
Variable	Means ± SD				
Playing position	CD (n=156)	FB (n=181)	CM (n=383)	WM (n=149)	FW (n=120)
	28.70±2.46	30.66±2.58	28.90±2.26	30.46±2.85	29.86±2.53
Competition	National League (n=474)	State Cup (n=171)	National Cup (n=139)	Supercup (n=15)	Int. Cup (n=190)
	29.82±2.67	29.60±2.29	28.78±2.83	28.31±1.39	29.45±2.45
Match outcome	Win (n=608)	Draw (n=187)		Loss (n=194)	
	29.43±2.65	29.51±2.43		29.93±2.59	
Match location	Home (n=504)	Neutral (n=43)		Away (n=442)	
	29.65±2.55	28.97±2.24		29.47±2.69	

Note. CD=central defenders; FB=fullbacks; CM=central midfielders; WM=wide midfielders; FW=forwards; Int=International. n=number of files.



Note. CD=central defenders; FB=fullbacks; CM=central midfielders; WM=wide midfielders; FW=forwards.

Figure 1. Individual coefficient of variation (%) of match peak speeds across the season, for each variable.



Note. CD=central defenders; FB=fullbacks; CM=central midfielders; WM=wide midfielders; FW=forwards.

Figure 2. Effect sizes [95%] of independent mean differences according to the analyzed variables (playing positions, competitions, match outcome, and match location).

Table 2. Independent mean differences [95% CI] with effect sizes (d) [95% CI]) within the analyzed variables (playing position, competition, match ooutcome, and match location).

Playing position	**CD (*n*=156)**	**FB (*n*=181)**	**CM (*n*=383)**	**WM (*n*=149)**	**FW (*n*=120)**
CD	-	1.96 [1.42, 2.50] *d*=0.78 [0.56, 1.00] *p*<.001	0.19 [-0.24, 0.63] *d*=0.08 [-0.10, 0.27] *p*=.378	1.76 [1.16, 2.36] *d*=0.66 [0.43, 0.90] *p*<.001	1.15 [0.56, 1.75] *d*=0.46 [0.22, 0.71] *p*<.001
FB			-1.77 [-2.19, -1.35] *d*=-0.75 [-0.93, -0.57] *p*<.001	-0.20 [-0.79, 0.39] *d*=-0.07 [-0.29, 0.14] *p*<.502	-0.81 [-1.40, -0.22] *d*=-0.32 [-0.55, -0.08] *p*=.008
CM				1.56 [1.10, 2.03] *d*=0.64 [0.45, 0.84] *p*<.001	0.96 [0.48, 1.44] *d*=0.41 [0.21, 0.62] *p*<.001
WM					-0.61 [-1.26, 0.05] *d*=-0.22 [-0.47, 0.02] *p*=.069
Competition	**National League (*n*=474)**	**State Cup (*n*=171)**	**National Cup (*n*=139)**	**Supercup (*n*=15)**	**International Cup (*n*=190)**
National League	-	-0.22 [-0.68, 0.23] (*d*=-0.09 [-0.26, 0.09]) *p*=.330	-1.04 [-1.55, -0.53] (*d*=-0.38 [-0.58, -0.19] *p*<.001	-1.51 [-2.88, -0.15] *d*=-0.57 [-1.09, -0.06] *p*=.029	-0.37 [-0.81, 0.07] *d*=-0.14 [-0.31, 0.03] *p*=.100
State Cup		-	-0.82 [-1.39, -0.24] *d*=-0.32 [-0.55, -0.09] *p*=.005	-1.29 [-2.48, 0.10] *d*=-0.57 [-1.12, -0.05] *p*=.034	-0.15 [-0.64, 0.35] *d*=-0.06 [-0.27, 0.15] *p*=.565
National Cup			-	-0.47 [-1.94, 0.99] *d*=-0.17 [-0.71, 0.36] *p*=.524	0.67 [0.10, 1.25] *d*=0.26 [0.04, 0.48] *p*=.022
Supercup				-	-1.15 [-2.41, 0.12] *d*=-0.48 [-1.01, 0.05] *p*=.076
Match outcome	**Win (*n*=608)**	**Draw (*n*=187)**	**Loss (*n*=194)**		
Win	-	0.08 [-0.34, 0.51] *d*=0.03 [-0.13, 0.20] *p*=.706	0.50 [0.08, 0.93] *d*=0.19 [0.03, 0.35] *p*=.021		
Draw		-	0.42 [-0.09, 0.93] *d*=0.17 [-0.03, 0.37] *p*=.103		
Match location	**Home (*n*=504)**	**Neutral (*n*=43)**	**Away (*n*=442)**		
Home	-	-0.68 [-1.47, 0.11] *d*=-0.27 [-0.58, 0.04] *p*=.089	-0.18 [-0.51, 0.16] *d*=-0.07 [-0.20, 0.06] *p*=.298		
Neutral		-	0.51 [-0.33, 1.34] *d*= 0.19 [-0.12, 0.51] *p*=.233		

Note. CD=central defenders; FB=fullbacks; CM=central midfielders; WM=wide midfielders; FW=forwards; *n*=number of files.

higher match peak speeds were reached during the National League in comparison with the National Cup (*d*=-0.38 [-0.58, -0.19], small effect size, *p*<.001) and with the Supercup (*d*=-0.57 [-1.09, -0.06], small effect size, *p*=.029); higher match peak speeds were reached during the State Cup in comparison with the National Cup (*d*=-0.32 [-0.55, -0.09], small effect size, *p*=.005) and with the Supercup (*d*=-0.57 [-1.12, -0.05], small effect size, *p*=.034); and higher match peak speeds were reached during the International Cup in comparison with the National Cup (*d*=0.26 [0.04, 0.48], small effect size, *p*=.022). Finally, higher match peak speeds were reached when the team lost in comparison with matches won (*d*=0.19 [0.03, 0.35], trivial effect size, *p*=.021).

Discussion and conclusions

This study compared match peak speeds across a full season regarding four variables: playing positions (central defenders [CD], fullbacks [FB], central midfielders [CM], wide midfielders [WM], and forwards [FW]), the different competitions disputed by the team (National League, State Cup,

National Cup, Supercup, and International Cup), match outcomes (wins, draws or losses), and match locations (home, neutral or away). The main findings of this study were that match peak speeds presented a coefficient of variation (CV) between 4% and 12% and match peak speeds mostly differed between playing positions and competitions than between match outcomes (only one difference with trivial effect size) and match locations (no differences).

Intra-individual CV ranged from 4 to 12%, with most players (90%, n=28) showing variations <10%. Although our CV range surpassed previous research reports of 4.9% within-players (Oliva-Lozano, Muyor, et al., 2021), it is closer to the CV range that accounts for players' positions (3-10%) (Al Haddad, Méndez-Villanueva, Torreño, Munguía-Izquierdo, & Suárez-Arrones, 2018). In the latter study, second strikers and fullbacks reported the lowest and highest CV, respectively, although the authors divided the CV for each part of the match. However, both studies presented the CV from all players or from all players for each playing position. Although there is no golden standard regarding CV, it is important to notice that this value is highly dependent on the sample size (Bedeian & Mossholder, 2000), which was partially seen in the data of this study (Figure 1). This means that match peak speeds remained fairly regular throughout the full season.

Match peak speeds have been brought to attention by recent research as a potential tool to apply normalized thresholds in order to classify high-speed displacements (Aiello, et al., 2023; Gualtieri, et al., 2023; Silva, Nakamura, Loturco, Ribeiro, & Marcelino, 2024). Notwithstanding, while sprint tests can provide important information, referring to peak speeds registered during tests can fail to consider the context (Kyprianou, et al., 2022) and displacement dynamics (Silva, et al., 2025). The current study contributes to this debate by highlighting specific variables that impact the match peak speed, with a special reference to playing positions and competitions. Differences between playing positions have been widely investigated with wide positions reaching higher match peak speeds than their teammates (Aquino, et al., 2017; Djaoui, Chamari, Owen, & Dellal, 2017; Massard, Eggers, & Lovell, 2018), which aligns with the findings of this study (Table 2). The reasoning for this is based on the players' capacities and the context. For instance, Djaoui et al. (2017) compared peak speeds achieved during sprint tests and competition, according to the players' positions. In that study, the authors reported higher peak speeds reached by FB, WM and FW in both scenarios, which highlights that the players' capacities were replicated, even with lower speeds, during competition. However, matches can also impact how players can expose their capabilities as shown by Al Haddad et al. (2015), where youth players decreased their relative peak speed (i.e., match peak speed as a percentage of the tested peak speed) as they approached adulthood. This highlights the importance of match context, which is analyzed in this study with competition, outcome, and location.

Regarding the different competitions, lower match peak speeds were found during the National Cup matches in comparison with the National League, State Cup, and International Cup matches (Table 2). The current findings differ from the findings reported by Freire et al. (2022), which considered the same competitions (except for the Supercup) in the same country. In the latter study, the authors reported non-significant differences (p=.408) of match peak speeds registered during the different competitions. Although team differences could explain our different findings, it is important to notice that, contrary to other competitions, the National Cup enables elite teams to face lower division teams, which occurred with the monitored team in this study. Considering that facing high-level opponents increase the high-intensity demands (Folgado, Duarte, Fernandes, & Sampaio, 2014), players may play matches against lower-level opponents with lower intensities, thus lowering the values of those matches' peak speeds. Nevertheless, all differences presented small effect sizes. Of note, caution is needed when extrapolating findings from the Supercup, due to the small sample size (as seen by the confidence intervals). This type of competition is usually played as an isolated match during the season, between the winners of the national leagues and cups, making the sample enlargement difficult. Moreover, since teams can change from season to season, researchers could potentially need to monitor several teams across different seasons to achieve a larger sample size. However, since comparisons between competitions were made individually (i.e., without an overall analysis such as an analysis of variance), this limitation is specific to the comparisons with this competition. The decision to include this competition allows for further comparisons since it is played in a neutral location.

Interestingly, similarities were found between peak speeds achieved during matches played at different locations. Previously, Oliva-Lozano, Rojas-Valverde, Gómez-Carmona, Fortes, and Pino-Ortega (2021) reported no differences of match peak speeds when comparing matches outcomes (wins, draws and losses) and match locations (home and away) of a Spanish first division team. Increasingly, Nassis (2013) also reported similar match peak speeds recorded during the FIFA World Cup 2010, where players competed at sea-level and altitude (up to 1753m). The current study presents a novel finding by reporting similarities with neutral location.

Regarding the match outcome, only one difference was registered, although with a trivial effect size: players achieved higher peak speeds during matches they lost in comparison with the matches won. This aligns with previous research (Oliva-Lozano, Rojas-Valverde, et al., 2021), and is probably explained with the match variability of high-speed displacements (Gregson, Drust, Atkinson, & Salvo, 2010). Notwithstanding, while it would be possible to speculate that players would achieve higher speeds to counter a disadvantage outcome, or to regain ball possession, previous research has reported similar peak speeds between teams with high or low percentages of ball possessions, including comparisons within playing positions (Bradley, Lago-Peñas, Rey, & Gomez Diaz, 2013). Although peak speeds are lower if players sprint with the ball (Carling, 2010), ball possession appears not to be the reason to justify potential differences of match peak speeds (Bradley, et al., 2013).

Importantly, three main limitations of this study should be addressed. First, and as previously mentioned, the number of observations of the Supercup matches prevented definite conclusions, or assessing the interaction between different variables, and an extended monitoring period or merging different teams could ensure more observations. Secondly, although practitioners can always collect the match peak speed from competition (as the highest speed achieved), players rarely achieve their tested maximal speeds (Buchheit, et al., 2021; Djaoui, et al., 2017), showing that this analysis should include tactical approaches and the effort dynamics. And finally, this study analyzed one team that reached later stages of all competition disputed, thereby translating to a specific scenario. Future studies should assess potential variations in match peak speeds in different contexts, including different competitions and considering national teams. For the latter, this could be of major importance, as final phases of the major competitions are disputed in a specific location.

According to the findings of this study, practitioners can use the match peak speed as a reference value to calculate a normalized displacement threshold. This would consider the differences in match peak speed found between playing positions. Importantly, this strategy would benefit match load monitoring by providing data that account for players' individuality and the real scenario, instead of unique situations registered during field tests. While soccer matches also present an absolute component, (i.e., coaches want their players reaching the ball before the opposition) (Hunter, et al., 2015) and practitioners can assess if training sessions are eliciting maximal speeds developments (Haugen, Seiler, Sandbakk, & Tønnessen, 2019), monitoring match load exclusively with the absolute approach would result in different intensities for different players (Sweeting, et al., 2017). Importantly, achieving high-speed efforts—such as exceeding 90% or 95% of an individual's absolute peak speed—during training may play a key role in reducing the risk of hamstring injuries (Gómez-Piqueras & Alcaraz, 2024). While normalized thresholds can provide a more accurate representation of match loads based on individual movement profiles, absolute peak speeds remain essential for the broader operationalization and monitoring of physical capacities in soccer.

However, practitioners should consider that match peak speeds can also differ during matches of National Cups, as teams can face opposition from lower divisions, and if their team wins or loses. Therefore, match peak speeds should periodically be assessed to ensure that the reference value was not exceptionally different due to the competition or the outcome. Therefore, when calculating normalized thresholds, practitioners should account for the context. According to the current findings, while the differences between playing positions would be accounted for with an individualized approach, practitioners should also consider that the reference value can change according to the competitions. For example, if practitioners choose a normalized threshold of 80% of players' match peak speed (Aiello, et al., 2023; Silva, et al., 2024), that value could differ if it is collected during the national league or the national cup matches. Accounting for the match peak speeds here reported, an 80% relative threshold for the national league would be 23.9 km/h (i.e., 80% of 29.82 km/h), while for the national cup it would be 23.0 km/h (i.e., 80% of 28.78 km/h). Increasingly, by acknowledging these differences, the coaching staff can prepare tactical strategies according to the expected peak speeds according to each context.

In conclusion, players' position is the highest differentiator of match peak speeds throughout a soccer season, which underlines the importance of players' individualization when assessing match load. Although competitions and outcomes resulted in small and trivial differences in match peak speeds, respectively, that could be related to the possibility of teams to face lower-league opponents. The findings of this study support the idea that match peak speeds can be used as a reference to establish normalized and individualized thresholds, as playing positions were the main reason for the reported differences in match peak speeds, which means that an absolute threshold would represent a different effort for each playing position.

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