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POSITION-SPECIFIC PHYSICAL PERFORMANCE OF PROFESSIONAL PLAYERS DURING FULL-SEASON MATCHES IN A GREEK SUPERLEAGUE ELITE TEAM

Michail Mitrotasios[A, B, C, D]

National and Kapodistrian University of Athens, School of Physical Education & Sport Science, Athens, Greece
ORCID: 0000-0003-2821-2526

Ioannis Ispyrlidis[A, B ,C, D]

Democritus University of Thrace, School of Physical Education & Sport Science, Komotini, Greece

Nikolaos Mantzouranis[A, B, C, D]

Democritus University of Thrace, School of Physical Education & Sport Science, Komotini, Greece
ORCID: 0000-0002-7125-5540

Emmanuel Vassiliades[A, B, C, D]

IdEF STAPS, Sorbonne Paris North University, Athens, Greece

Vasilis Armatas[A, B, C, D]

National and Kapodistrian University of Athens, School of Physical Education & Sport Science, Athens, Greece
ORCID: 0000-0003-1689-729X | e-mail: v-armatas@phed.uoa.gr

[A] Study Design; [B] Data Collection; [C] Statistical Analysis; [D] Manuscript Preparation

Abstract The aim of the present study was to examine how various playing positions and opponent team ranking affect the covered distances and the acceleration and decelerations profile of a team during 2018–2019 Greek *SuperLeague*. StatSport GPS system recorded in match-play real-time both the players' covered distances (m) and the number of acceleration/deceleration runs (n) in zones from 3 m/s^2 to 10 m/s^2. The descriptive statistics showed that the players' mean covered distances were 10,289 m per match. The *MANOVA* revealed significant differences of the players' covered distances in all intensity zones in relation to their playing positions ($F_{(12,\ 513.567)}$ = 41.862; p = 0.000) and the opponent team ranking *(*$F_{(3,189)}$ = 3.687; p = 0.013). Furthermore, no significant interactions were observed between the playing positions and the opponent team ranking ($F_{(12,\ 500.339)}$ = 1.149; p = 0.318). Moreover, no significant differences were recorded regarding the opponent team ranking with the amount of accelerations ($F_{(1,189)}$ = 0.501; p = 0.480) and decelerations ($F_{(1,189)}$ = 1.342; p = 0.248). Summarizing, the current study showed the high-demanding competitive performance of midfielders, full backs and forwards regardless the standing of the opponent teams. Hence, the team's training must include special stimuli of aerobic and high-intensity workouts according to the players' playing positions in the match.

Key words: soccer, speed, match status, championship

Introduction

The physical activity profile in soccer is intermittent, with the players regularly alternating between brief bouts of high-intensity exercise and longer periods of low-intensity exercise (Rampinini et al., 2007). In addition, the contemporary soccer match-play is characterized by high-intensity speeds in the covered distances by the players of the elite teams (Carling, Bradley, McCall, Dupont, 2016). Moreover, the total covered distances and the match-play intensity zones are representative of the overall severity of exercise and the players' contributions towards the total team effort during the competitive period matches. For the above reasons and aiming to improve competitive performance of soccer players, it would be helpful to identify the most important elements that could increase the success rate. Furthermore, for the entire evaluation of the playing loads, the number of accelerations and decelerations performed by the players, in both official matches and trainings, must be taken into account because they evoke great exertion to the soccer players due to the eccentric type of muscular contraction (Little, Williams, 2007; Tibaudi, 2011).

Nowadays, limited data exists regarding the players' internal and external loadings in relation to their playing positions during the training as well as in the official in-season match in elite soccer teams. In addition, each separate playing position has different technical and physical conditioning demands from the professional players (Dellal, Wong, Moalla, Chamari, 2010). One of the most prominent finding from the time-motion analysis studies was the great differences in the energetic and physical performance characteristics among the various playing positions of the elite players (Di Salvo et al., 2007; Bradley, Noakes, 2013). When comparing the five most-common players' positions, it is clear that central and wingers cover more distance than any other position, with the wingers and full backs also displaying superior high-intensity activity profiles while attackers and central defenders consistently show the lowest intensity-specific physical performance during a match (Ispirlidis, 2021).

Currently, several studies have attempted to detect the elements of internal and external loadings regarding the professional players' performance in both official matches and trainings (Casamichana, Castellano, Castagna, 2012; Payet et al., 2016; Goto, 2018), in order to highlight the necessary parameters for a more qualitative team and individual analysis. Especially in soccer, advanced technology offers the opportunity for a more qualitative match-analysis, through internal (*e.g* heart rate) and external exertion records [through the recordings of covered distances with different playing intensities, acceleration or deceleration, change of direction, energy cost, etc.]. The Global-Positioning-System (GPS) technology has been increasingly applied in both semi-professional and professional soccer (Gabbett, 2016). Worldwide, the top-soccer clubs use the GPS technology for the real-time performance monitoring, although each of them have their own approach in matches and simulate their overall training workouts in order for the elite players to receive the match-specific stimuli and simultaneously to practice their physical conditioning with a variety of tactical skills with the ball (Djaoui, Chamari, Owen, Dellal, 2017).

However, there are few studies regarding the elite professional players' physical performance in relation to their playing position in official match and the contextual parameters in elite teams that participate in top-level Greek league by applying the GPS soccer-specific technology (Smpokos, Mourikis, Linardakis, 2018a, b). This research hypothesis based on the assumption that the professional players match-play performance will differ regarding their playing position and their opponent team ranking. Thus, the aim of the present study was to examine how various playing positions and opponent team ranking affect the covered distances and the acceleration and decelerations profile of a team during 2018–2019 Greek *SuperLeague*.

Methods

Participants

Eighteen (n = 18) professional players aged 27 ±3.3 yrs., with body mass of 77.1 ±6.9 kg, stature 180.5 ±13 cm and 9.4 ±1.9 percentage (%) of body fat were recorded in the present study. Their match-play performance was analyzed during the Greek *Superleague* 2018–2019 regular season in 30 official matches (15 home & 15 away). The current study was carried out in a team which ranked in the top-3 of the above season, qualifying in the next period *UEFA Europa League* tournament (Group Stages). The experimental protocol was approved by the institutional review boards and was in accordance with the Declaration of Helsinki.

Data Collection

The external loads of the starting line-up outfield players who completed the 90 min in their team's full-season matches were recorded (goalkeepers excluded). The analyzed data was collected from the entire regular season of the Greek *Superleague* started on 25 August 2018 until 5 May 2019. During the national championship, each player wore a portable transmitter in a personal vest recording the match-play selected parameters during their official matches (National Cup matches excluded). The transmitter was the *FIFA* Approved StatSport GPS Tracker-Apex Athlete Series (*StatSports Group Limited, Newry, N. Ireland*) with high-frequency 18 Hz GPS (10Hz GNSS) which recorded the players' covered distances (m) in real-time, in the intensity zones of:

i. Z_1 = <4 $m.s^{-1}$
ii. Z_2 = 4–5.5 $m.s^{-1}$
iii. Z_3 = >5.5 $m.s^{-1}$

The number of accelerations and decelerations were counted from the GPS platform in the players' runs greater than 3 m/s^2 as a default. The assessed players' match-play accelerations and decelerations zones as a default were:

i. 3–4 m/s^2
ii. 4–5.5 m/s^2
iii. 5.5–7 m/s^2
iv. 7–10 m/s^2
v. Total 3–10 m/s^2

201 individual match-play observations were recorded. More specifically, the players' measurements per playing positions during the 2018–2019 *Superleague* matches were: 55 for central defenders, 33 for full backs, 38 for central midfielders, 26 for forward and 49 for wingers. The opponent team ranking was based on the division of the 16-teams' Greek *Superleague* from the 2018–2019 season teams' position from 1^{st} to 8^{th} and 9^{th} to 16^{th}.

Statistical analysis

The normal distribution of the data was verified by using the *Shapiro-Wilk* test ($p > 0.05$) and the homoscedasticity was confirmed by *Levene's test*. It is worth noticing, that, where the performance variables were not normally distributed or the homoscedasticity was violated, non-parametric test were conducted (*Kruskal-Wallis test*) to verify whether there were significant group differences. Descriptive statistics were calculated for each variable including means (M) and standard deviations (±SD). For the comparison of the independent variables

("playing position" and "team ranking" in relation to the players "match performance"), the multivariate analysis was used (GLM) and the effect size (η^2) was estimated [in accordance to Cohen (1988) the Effect Size (ES) graded as small (ES): 0.01; medium ES: 0.06; large ES: 0.13]. The pair-wise comparisons were performed by using the *Bonferroni* test *(post-hoc)*. The statistical significance was defined at 5% ($p < 0.05$). All statistical analyses were carried out by employing the IBM SPSS v26.0 statistics software for Windows (*SPSS Inc., Chicago, IL, USA*).

Results

The *MANOVA* results revealed significant differences in the match-play covered distances of the players in all intensity zones in relation to their "playing position" (*Wilks' Lambda* = 0.165*;* $F_{(12, 513.567)} = 41.862$; $p = 0.000$; $\eta^2 = 0.458$) and "opponent team ranking" *(Wilks' Lambda* = 0.945; $F_{(3,189)} = 3.687$; $p = 0.013$; $\eta^2 = 0.055$). In contrary, no significant interactions were observed between the categorical variables "playing position" of the players and the "opponent team ranking" *(Wilks' Lambda* = 0.931; $F_{(12, 500.339)} = 1.149$; $p = 0.318$; $\eta^2 = 0.024$). Table 1 illustrates the players' performance intensity zones in the official matches of their team according to their playing position and the ranking of the opponent team.

Table 1. Players' match performance in relation to their intensity zones and their playing position and opponent team ranking (mean ± SD)

Distance covered (m)		Total		Rank 1–8 (n = 103)		Rank 9–16 (n = 98)		F-values	Sig	η^2
		mean	SD	mean	SD	mean	SD			
Zones <4 m.s^{-1} – = >5.5 m.s^{-1}	Total (201)	10,289.2	728.8	10,160.0	706.4	10,425.1	730.8	$F_{(1, 189)} = 6.989$	0.009	0.035
	CD (55)	9,939.2	559.1	9,825.9	531.8.	10,048.5	572.4	$F_{(1, 53)} = 2.228$	0.141	0.040
	FB (33)	10,649.1	667.6	10,446.7	721.1	10,864.2	548.0	$F_{(1, 31)} = 3.473$	0.072	0.101
	CM (38)	10,961.5	697.1	10,907.6	722.5	11,005.1	690.7	$F_{(1, 36)} = 0.180$	0.674	0.005
	F (26)	9,728.8	586.6	9,628.0	571.2	9,866.3	606.1	$F_{(1, 24)} = 1.049$	0.316	0.042
	W (49)	10,215.7	497.6	10,138.2	398.7	10,310.8	593.4	$F_{(1, 47)} = 1.473$	0.231	0.030
Z1 = <4m.s^{-1}	Total (201)	8,229.5	515.4	8,105.5	479.2	8,359.8	522.3	$F_{(1, 189)} = 11.084$	0.001	0.055
	CD (55)	8,325.6	450.3	8,229.0	402.9	8,418.8	480.5	$F_{(1, 53)} = 2.510$	0.119	0.045
	FB (33)	8,245.3	463.2	8,128.5	471.2	8,369.4	434.8	$F_{(1, 31)} = 2.322$	0.138	0.070
	CM (38)	8,608.1	448.6	8,485.0	438.5	8,707.7	441.8	$F_{(1, 36)} = 2.402$	0.130	0.063
	F (26)	7,637.6	469.6	7,566.4	454.6	7,734.8	494.1	$F_{(1, 24)} = 0.810$	0.377	0.033
	W (49)	8,131.3	376.7	8,028.1	296.5	8,258.1	430.0	$F_{(1, 47)} = 4.884$	0.032	0.094
Z_2 = 4-5.5m.s^{-1}	Total (201)	1,453.7	321.6	1,432.5	321.0	1,476.1	322.5	$F_{(1, 189)} = 0.653$	0.420	0.003
	CD (55)	1,248.1	220.1	1,209.2	188.2	1,285.6	244.5	$F_{(1, 53)} = 1.677$	0.201	0.031
	FB (33)	1,527.4	229.0	1,491.6	205.6	1,565.5	252.7	$F_{(1, 31)} = 0.853$	0.363	0.027
	CM (38)	1,826.2	377.5	1,862.4	405.4	1,796.8	360.8	$F_{(1, 36)} = 0.278$	0.601	0.008
	F (26)	1,274.8	218.4	1,229.8	187.7	1,336.3	250.4	$F_{(1, 24)} = 1.542$	0.226	0.060
	W (49)	1,441.1	165.6	1,460.6	152.3	1,417.2	181.2	$F_{(1, 47)} = 0.829$	0.367	0.017
Z_3 = >5.5m.s^{-1}	Total (201)	606.0	236.9	621.9	222.1	589.3	251.6	$F_{(1, 189)} = 0.229$	0.633	0.001
	CD (55)	365.5	130.5	387.7	128.1	344.1	131.5	$F_{(1, 53)} = 1.550$	0.219	0.028
	FB (33)	876.4	161.8	826.6	149.2	929.3	162.2	$F_{(1, 31)} = 3.590$	0.067	0.104
	CM (38)	527.3	150.3	560.2	163.4	500.6	137.0	$F_{(1, 36)} = 1.495$	0.229	0.040
	F (26)	816.4	156.0	831.8	141.5	795.2	178.8	$F_{(1, 24)} = 0.340$	0.565	0.014
	W (49)	643.3	142.6	649.5	151.9	635.6	133.3	$F_{(1, 47)} = 0.114$	0.737	0.002

Note: Effect size (η^2): 0.01 = small effect, 0.06 = medium effect, >0.13 = large effect.
Abbreviations: Central Defender (CD), Full Backs (FB), Central Midfielders (CM), Forwards (F), Wingers (W).

In addition, the *ANOVA* presented that the total covered distances (m) by the players of the studied team during the Greek *Superleague* matches significantly differed in relation to the players "playing position" ($F_{(4, 191)}$ = 25.507; p = 0.000; η^2 = 0.348). Specifically, central midfielders covered a greater amount of distances during the matches in relation to central defenders, forwards and wingers (p < 0.001), as well as the full backs compared to the central defenders, forwards (p < 0.001) and wingers (p < 0.05). Moreover, statistically significant differences were recorded among the players' "playing position" and their match-play covered distances with intensity <4 m.s^{-1} ($F_{(4, 191)}$ = 19.502; p = 0.000; η^2 = 0.290), with central midfielders to cover a greater amount of distances in relation to the other playing position (p < 0.05), while full backs covered significantly more match-play distances only in relation to forward players (p < 0.001). Similarly, in the playing zone from 4 to 5.5 m.s^{-1} central midfielders covered significantly greater amount of distances compared to the other playing position ($F_{(4, 191)}$ = 34.702; p = 0.000; η^2 = 0.421). Furthermore, in the intensity zone >5.5 m.s^{-1}, the significantly greatest amount of distances were covered by full backs and forwards ($F_{(4, 191)}$ = 82.918; p = 0.000; η^2 = 0.635) during their team's official matches.

Analyzing the "opponent team ranking", the *MANOVA* revealed statistically significant greater amount of match-play covered distances by the players ($F_{(1, 189)}$ = 6.989; p = 0.009; η^2 = 0.035) against the weaker opponents of the Greek *Superleague* (Team Ranking 9–16). Hence, this team's players covered 10,425.1 m (±730.8 m) when they played against the above teams while they covered less distances (10,160 m ±706.4 m) when they played against the stronger opponents of this national league (Team Ranking 1–8). Furthermore, significant differences were recorded in the players' covered distances in all playing positions regarding the opponent team ranking ($F_{(1, 189)}$ = 11.064; p = 0.001; η^2 = 0.055) in the match-play intensity zone <4 m.s^{-1} (8,359.8 m ±522.3 m vs 8,105.5 m ±479.2 m.

Regarding the maximal match-play speed of the players that was recorded during the matches of the Greek *Superleague*, the *MANOVA* reported significant differences of the above variable among "playing position" of the players ($F_{(1, 196)}$ = 9.798; p = 0.000; η^2 = 0.167). Specifically, forwards performed with a maximal playing intensity of 32.3 ±1.4 m.s^{-1}, full backs with 31.4 ±3.5 m.s^{-1} while wingers were recorded with a max-speed of 30.6 ±1.4 m.s^{-1}, higher than the maximal playing intensity which was recorded for central defenders (29.9 ±1.9 m.s^{-1}) and central midfielders (29.4 ±1.4 m.s^{-1}).

Similarly, the *MANOVA* results revealed significant interaction between the "playing position" of the players' and the "accelerations" performed by the players during the match (*Wilks' Lambda* = 0.736*;* $F_{(16, 590.262)}$ = 3.901; p = 0.000; η^2 = 0.074). In particular, the multi analysis linear model verified significant differences between the number of accelerations in all zones during the matches and the playing positions of the players (p < 0.01). In match-play, central midfielders and full backs, in relation to the rest of the positions, performed a significant greater amount of accelerations >3 m/s^2 ($F_{(4, 196)}$ = 4.714; p = 0.001; η^2 = 0.088) in relation to the accelerations which were recorded from central defenders and wingers (p < 0.01).

Regarding the decelerations, the *MANOVA* results showed significant differences in relation to the "playing position" of the players in the amount of the analyzed deceleration zones during the matches of the studied team (*Wilks' Lambda* = 0.531; $F_{(16, 590.262)}$ = 8.489; p = 0.000; η^2 = 0.146). In deceleration runs >3 m/s^2 significant differences were recorded among the players playing positions ($F_{(4, 196)}$ = 16.458; p = 0.000; η^2 = 0.251) in which central midfielders and full backs presented a greater amount of match-play decelerations compared to the other playing position of the players. Table 2 presents the amount of the match-play accelerations and decelerations in relation to the players' playing position.

Table 2. Players' accelerations/decelerations (n) in the match in relation to their intensity zone and their playing position (mean ± SD)

	Total (201)	CD (55)	FB (33)	CM (38)	F (26)	W (49)	F-values	Sig	η^2
Accelerations									
3–10 m/s^2	196.5 ±28.9	190.8 ±30.0	203.0 ±28.5	210.8 ±27.6	191.5 ±34.2	188.6 ±28.9	$F_{(4, 196)} = 4.714$	0.001	0.088
3–4 m/s^2	86.3 ±26.4	92.3 ±26.3	75.2 ±15.7	98.8 ±27.3	74.8 ±23.8	83.6 ±27.4	$F_{(4, 196)} = 6.318$	0.000	0.114
4–5.5 m/s^2	51.1 ±10.7	49.0 ±10.5	54.2 ±10.5	56.1 ±11.4	49.8 ±11.5	48.0 ±8.3	$F_{(4, 196)} = 4.678$	0.001	0.087
5.5–7 m/s^2	43.1 ±19.1	37.3 ±17.1	51.3 ±13.7	42.8 ±22.0	48.1 ±20.5	41.8 ±19.2	$F_{(4, 196)} = 3.491$	0.009	0.067
7–10 m/^{2}	15.6 ±9.6	12.2 ±7.7	22.4 ±8.5	13.1 ±8.9	18.8 ±11.2	15.2 ±9.2	$F_{(4, 196)} = 8.285$	0.000	0.145
Decelerations									
3–10 m/s^2	203.5 ±33.5	196.5 ±32.1	217.3 ±32.3	230.6 ±29.4	179.3 ±28.7	194.0 ±23.5	$F_{(4, 196)} = 16.458$	0.000	0.251
3–4 m/s^2	82.8 ±24.9	86.6 ±26.4	73.3 ±14.8	99.5 ±24.2	67.2 ±17.7	80.1 ±24.5	$F_{(4, 196)} = 10.013$	0.000	0.170
4–5.5 m/s^2	48.8 ±10.4	48.1 ±9.8	48.1 ±8.9	55.9 ±9.8	42.4 ±10.3	47.8 ±9.8	$F_{(4, 196)} = 8.063$	0.000	0.141
5.5–7 m/s^2	45.3 ±15.8	40.9 ±15.3	53.7 ±14.2	49.1 ±18.4	44.2 ±16.7	42.3 ±12.0	$F_{(4, 196)} = 4.740$	0.001	0.088
7–10 m/s^2	26.7 ±14.4	20.9 ±9.5	42.2 ±14.0	26.1 ±13.5	25.5 ±14.8	23.7 ±12.5	$F_{(4, 196)} = 16.348$	0.000	0.250

Effect size (η^2): 0.01 = small effect, 0.06 = medium effect, >0.13 = large effect.
Abbreviations: Central Defender (CD), Full Backs (FB), Central Midfielders (CM), Forwards (F), Wingers (W).

Finally, the analysis of the amount of accelerations/decelerations which were performed by the players during the full-season official matches in relation to the opponent team ranking did not confirm any statistically significant interaction between the above match-play parameters in the studied team. In particular, no significant differences were observed among the opponent team ranking with the accelerations ($F_{(1, 189)} = 0.501$; $p = 0.480$; $\eta^2 = 0.003$) and decelerations ($F_{(1, 189)} = 1.342$; $p = 0.248$; $\eta^2 = 0.007$). Table 3 outlines the number of match-play accelerations/decelerations of the players in relation to their playing positions and the opponent team ranking.

Table 3. Players' accelerations/decelerations (n) in the match in relation to their playing position and team ranking (mean ± SD)

	Position	Rank 1–8 (n = 103)		Rank 9–16 (n = 98)		F-values	Sig	η^2
		mean	SD	mean	SD			
Acceleration >3 m/s^2	Total (201)	195	26.5	197	31.3	$F_{(1, 199)} = 0.420$	0.517	0.002
	CD (55)	185	29.6	196	30.0	$F_{(1, 53)} = 1.734$	0.194	0.032
	FB (33)	203	21.6	203	35.1	$F_{(1, 31)} = .004$	0.948	0.000
	CM (38)	217	22.5	205	30.5	$F_{(1, 36)} = 1.850$	0.182	0.049
	F (26)	189	24.1	195	45.6	$F_{(1, 24)} = 0.158$	0.694	0.007
	W (49)	1,881	20.3	90	21.0	$F_{(1, 47)} = 0.77$	0.782	0.002
Deceleration >3 m/s^2	Total (201)	203	31.7	205	35.5	$F_{(1, 199)} = 0.151$	0.698	0.001
	CD (55)	194	32.5	199	32.2	$F_{(1, 53)} = 0.319$	0.575	0.006
	FB (33)	219	24.6	216	39.6	$F_{(1, 31)} = 0.062$	0.806	0.002
	CM (38)	235	25.9	227	32.1	$F_{(1, 36)} = 0.728$	0.399	0.020
	F (26)	179	21.4	180	37.6	$F_{(1, 24)} = 0.017$	0.897	0.001
	W (49)	194	22.5	194	25.2	$F_{(1, 47)} = 0.000$	0.996	0.000

Effect size (η^2): 0.01 = small effect, 0.06 = medium effect, >0.13 = large effect.
Abbreviations: Central Defender (CD), Full Backs (FB), Central Midfielders (CM), Forwards (F), Wingers (W).

Discussion

The results showed that the players' average covered distances during the official matches of their team in the national league of 2018–2019 was 10,289 m per match. Regarding the team opponent ranking, the players covered a greater amount of distances when they played with the teams ranked from the 9th to 16th position (10,425 m) in relation to the matches against the teams ranked from the 1st to 8th position of the *Superleague* (10,160 m). This finding is in accordance with similar design studies, which analyzed the physical performance of the players from a top-club that participated in the *Superleague* and resulted in the fact that the players of an elite team cover more than 10,000 m per official match in the Greek league (Smpokos et al., 2018b; Mitrotasios, Ispyrlidis, Mantzouranis, Vassiliades, Armatas, 2021). More specifically and in conjunction with the bibliography, the present study confirmed that central midfielders/wingers and full backs recorded with a greater match-play performance, in relation to the rest of the playing positions, regardless the opponent team ranking (Elyakim et al., 2020). Thus, the covered distances during their matches were 10,901 m for central midfielders, 10,446 m for full backs and 10,138 m for wingers, when the opponent team ranked from the 1st to 8th position of the Greek *Superleague*. However, during the in-season matches the above players performed marginally better in the matches against the teams ranked from 9th to16th position in the national league. Hence, the match-play of the studied players was recorded 11,005 m for central midfielders, 10,864 m for full backs and 10,310 m for wingers, confirming that the matches against low position teams demand from the players a higher and a more qualitative performance in order to reach the winning outcome (Ispyrlidis, Gourgoulis, Mantzouranis, Gioftsidou, Athanailidis, 2020).

Furthermore, according to bibliography, in match-play intensity zones higher than 5.5 $m.s^{-1}$, which in modern soccer refers to the transition-to-attack phase, the studied players did not present any differences between their performance and the match status, such as the opponent team ranking. The above finding confirms that the elite teams focus on the winning match outcome regardless the level of its opponent (Brito, Hertzog, Nassis, 2016; Redwood-Brown et al., 2018). Hence, during the in-season matches with teams ranked from 1st to 8th position of the Greek *Superleague* the covered distances with sub-maximal intensities were recorded as high as 560 m for central midfielders, 827 m for full backs and 650 m for wingers. Similarly, in the matches against the teams ranked in the national league from 9th to 16th position, the match-play maximal zone (>5.5 $m.s^{-1}$) was 500 m for central midfielders, 929 m for full backs and 636 m for wingers.

Regarding the amount of players' acceleration and deceleration runs during this elite-team official matches in the Greek *Superleague* period of 2018–2019, no significant differences were detected between the accelerations/decelerations in the total intensity zones (3–10 m/s^2). This finding is in accordance with a similar design study which confirms that the number of match accelerations/decelerations in professional players are similar regardless their playing positions (Vigh-Larsen, Daglas, Andersen, 2018). As far as the differences between the players' positions are concerned, the amount of match-play accelerations for central defenders was 191, for central midfielders 211, for wingers 189, for full backs 203 and for forwards 192. Similarly, the number of the match-play decelerations during the full-season matches were, 197 for central defenders, 230 for central midfielders, 194 for wingers, 217 for full backs and 180 for forwards.

Interestingly, the analysis of the amount of accelerations >3 m/s^2 showed, like a similar study, no significant interactions between the players' position and the opponent team ranking (Russell et al., 2016). Thus, when this study's participants played in the national league with a high position ranking team (1–8), the number of accelerations were recorded 186 for central defenders, 218 for central midfielders, 188 for wingers, 203 for full backs and 189 for

forward players. Similarly, when this Greek *Superleague* team played against the low position ranking teams (9–16), the players' number of accelerations >3 m/s^2 were estimated 196 for central defenders, 205 for central midfielders, 190 for wingers, 203 for full backs and 195 for forwards.

Similarly with the accelerations, the number of decelerations >3 m/s^2 did not present any significant interactions in relation to the players' position and the opponent team ranking. So, when the players played in the Greek *Superleague* against a high position ranking team (1–8), the amount of decelerations were recorded 194 for central defenders, 235 for central midfielders, 194 for wingers, 219 for full backs and 179 for forward players. Similarly, when this team played against the low position ranking teams (9–16) the players' amount of decelerations >3 m/s^2 were estimated 199 for central defenders, 227 for central midfielders, 194 for wingers, 216 for full backs and 180 for forwards. The above findings are in agreement with relevant results highlighting the special demands of all playing positions regarding the eccentric mode of their muscular contractions (Ingebrigtsen, Dalen, Hjelde, Drust, Wisloff, 2015; Tibaudi, 2011).

Conclusion

Summarizing, this study showed that, regarding the standing of the opponent team, the players covered a greater amount of distances when they played with the low-ranked teams (10,425 m) in relation to the matches against the high-ranked teams (10,160 m) of the Greek *Superleague.* As far as the players' playing position is concerned, this study confirmed that central midfielders, full backs and wingers were the most performance-demanding positions in an elite team. Additionally, central midfielders covered greater distances in the playing zone 1 and 2, full backs in zone 2 and 3 and wingers and forwards in zone 3. Furthermore, the total of the studied players' accelerations/decelerations were as high as required for the match loads of this team that was focused on winning results regardless the opponent team status. Finally, in match-play, central midfielders and full backs, in relation to the rest of the positions, performed a significant greater amount of accelerations >3 m/s^2 due to their crucial role in the transition-to- attack phase in their team.

Practical applications

The findings of this research study could offer valuable information to the coaches of the professional teams in order to simulate the official match conditions in the training workouts during the competitive period. In addition, the contemporary coaches will be able to manage and sustain the high intensity loads in the periodization of the microcycle sessions in elite soccer teams. Future research could assess the possible effects of the elite players' match-play performance not only on the winning outcome of the match, but also on the risk of injuries and/or muscle damages in the highly demanding modern soccer.

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