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ORIGINAL ARTICLE

Differences in technical performance by team ranking and match location in three consecutive English Premier League seasons

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ABSTRACT

This study aimed to compare the technical performance among high-ranked, medium-ranked, and low-ranked teams over three consecutive seasons (2021-2022 to 2023-2024) of the English Premier League (EPL), and to compare the technical performance at home and away for each group. Data were collected from Whoscored, EPL, and the Transfermarket websites. A one-way ANOVA and an independent t-test were used to analyse data. Results indicated that high-ranked teams outperformed medium- and low-ranked teams in most attacking and goal scoring, passing and organizing variables ($p < .05$). Meanwhile, low- and medium-ranked teams excelled in long balls and defending variables, including tackles, interceptions, shot blocks, clearances, and total saves ($p < .05$). Across all groups, performance was better at home for total shots, shots on target, shots off target, shots from open play, crosses, key passes, and clearances ($p < .05$). However, pass completion was the only variable that was better at home for high-ranked teams ($p < .05$). In conclusion, high-ranked teams excel in technical performance, particularly in attacking and goal scoring, organizing and passing variables. Playing at home is an important factor in achieving victory, especially for high- and medium-ranked teams. Therefore, the researchers recommend adopting tactical approaches and recruiting skilled players to achieve top positions in the EPL.

Keywords: Performance analysis, Soccer match, Match location, Goal scoring, Possession, Defence.

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INTRODUCTION

EPL is considered one of the best and most exciting soccer leagues in the world, and also the most popular, as millions of soccer fans and followers in Europe and around the globe are highly interested in the matches played in this competition (Schreyer et al., 2018). Besides its fame, the EPL also attracts many high-level soccer players from around the world due to the titles and financial incentives that encourage players to join one of the competing teams (Matesanz et al., 2018). From a financial perspective, the EPL features the most expensive players compared to other global leagues and is the richest in terms of television broadcast revenues (Matesanz et al., 2018).

The EPL consists of 20 clubs competing for the top positions over two phases: home and away. The season begins in August each year, with each club playing one home match and one away match against every other team in the league. The top four teams each year qualify for the UEFA Champions League for the following season, while the bottom three teams in the rankings are relegated, and the top three teams from the first division are promoted. One of the most notable characteristics of the EPL competition is the changing rankings of the competing teams every season. This is naturally due to several indicators that contribute to these rankings (teams in the top tier, teams in the middle of the table, and teams at the bottom playing to avoid relegation). One of the key reasons for success in sports competitions is the integration of physical, technical, and tactical aspects, although we may find that teams at the bottom of the table also have players with high levels of physical fitness (Morgans et al., 2025).

Analysing technical performance in football is an important tool for evaluating team behaviour and improving overall team results (Yi et al., 2019). A common approach is to link success with various performance indicators related to the game to identify playing patterns that increase or decrease a team's chances of success. For example, total shots, shots on target, ball possession, passing, playing formations, and some defensive variables are all linked to team success (Liu et al., 2015). However, the overall teams' technical performance can also be influenced by contextual variables such as match location (home or away), opponent quality (strong or average team), and match status (winning or losing) (Lago-Peñas, & Lago-Ballesteros, 2011; Liu, 2015; Moreira Praça et al., 2023; Kubayi, & Stone, 2024). Match location is considered one of the most influential contextual variables on team performance (Almeida, & Leite, 2021). Playing against teams on their home ground can impact the opponent's technical and tactical performance, especially as the visiting team may struggle to predict the tactical plans of the home team, making it more susceptible to conceding goals (Diana et al., 2017). Additionally, fan support is one of the key variables affecting a team's physical and technical performance and its ability to secure points (Chen et al., 2022; Wang & Qin, 2023; Bhagwandeen et al., 2024).

To the researchers' knowledge, few studies have compared technical performance based on final team ranking or examined technical performance at home and away in EPL, particularly after COVID-19. Therefore, the study aims to compare the technical performance among high-ranked, medium-ranked, and low-ranked teams over three consecutive seasons of the EPL, and to compare the technical performance at home and away for each group (high-ranked, medium-ranked, and low-ranked).

MATERIAL AND METHODS

Sample

This study included 1140 matches of 20 teams (n=20) from three consecutive seasons of the EPL (2021/2022, 2022/2023, and 2023/2024). The observed matches included professional soccer players;

therefore, the study was conducted following the Declaration of Helsinki (World Medical Association, 2013). The 20 teams were divided into three groups. Table 1 represents the characteristics of each group.

- High-ranked: The top six teams in the final league standings (n=6), competing for the league title or European seats in prestigious leagues like the UEFA Champions League and the UEFA Europa League.
- Medium-ranked: The eight teams that occupied mid-table positions in the final standings (from seventh place to fourteenth place) (n=8).
- Low-ranked: The bottom six teams in the final league standings (n=6), including the three teams relegated to the Championship.

Table 1. Teams' characteristics.

Variables	Mean ± SD		
	High-ranked	Medium-ranked	Low-ranked
Age of players (years)	24.46 ± 0.63	25.04 ± 0.43	25.13 ± 0.65
Foreign players (%)	59.49 ± 2.61	61.60 ± 8.55	58.65 ± 8.43
Time-loss injuries# (n)	33.33 ± 4.92	29.20 ± 4.66	33.94 ± 2.45
Total market value (m EUR)	886.72 ± 206.2 [b c]	465.75 ± 103.30 [a]	318.37 ± 80.38 [a]

Note. Injuries that result in players missing playing time due to their severity; m EUR: millions Euros; [a]: significant different to high-ranked teams (p < .05); [b]: significant different to medium-ranked teams (p < .05); [c]: significant different to low-ranked teams (p < .05).

Data collection

The data were collected from the international website WhoScored (www.whoscored.com), which specializes in gathering detailed match data, especially for the top five leagues. This website relies on the OPTA system for data collection, which has been proven to be reliable (Liu et al., 2013) and has been used in many previous studies on performance analysis in soccer (Liu et al., 2015; Liu et al., 2016; Yi et al., 2019). WhoScored website helps provide the average technical performance for each team during the various seasons, as well as the average of home and away performance for each team. The researchers took the average technical performance over three seasons, and the sample was adopted as 20 teams (n = 20). Injury history was collected from the official EPL website, and teams' market value from the international website specializing in player transfers and values, Transfermarkt (www.transfermarkt.com).

Variables

Twenty-five technical variables were included in this study. The technical variables were divided into three categories, represented by attacking and goal scoring variables, passing and organizing variables, and defensive variables. These classifications were adopted based on previous studies (Liu et al., 2015; Liu et al., 2016). The contextual variable in this study was represented by match location. Table 2 shows the definition of each variable.

Statistical analysis

Data in this study are reported as mean and standard deviation (SD). The normality of the data distribution was checked using the Shapiro-Wilk test, and the homogeneity of variance was assessed using Levene's test. One-way ANOVA was used to compare team characteristics and the overall technical performance among the three categories (high-ranked, medium-ranked, and low-ranked). In cases of significant differences, Tukey's HSD test was used for post-hoc comparisons. Effect sizes were calculated using eta squared (η^2), with values interpreted as small ($\eta^2 = 0.01$), medium ($\eta^2 = 0.06$), and large ($\eta^2 = 0.14$), providing insights into the magnitude of differences between groups. An independent t-test was used to compare the

home and away technical performance of each ranking group. Cohen's d effect size was also used to determine the practical differences between home and away technical performance, with values interpreted as small (0.2), moderate (0.5), and large (0.8). The significance level was set at $p \leq .05$. All calculations were performed using SPSS version 26.

Table 2. Technical and contextual variables including in this study.

Variables	Definitions
Attacking and goal scoring	
Total goals (n)	The total number of goals scored during a sports season
Goals per match (n)	Number of goals scored per match during the sports season
Total shots (n)	Number of shots per match during the sports season
Shots on target (n)	Number of shots on target per match during the sports season
Shots off target (n)	Number of shots off target per match during the sports season
Shots from open play (n)	Number of shots from open play per match during the sports season
Shots from counters (n)	Number of shots from counter-attacks per match during the sports season
Goal efficiency (%)	The number of goals scored relative to the total shots, given by the formula: Goal efficiency = (goals × 100 / total shots)
Passing and organizing	
Possession (%)	Ball possession percentage per match during the sports season
Total passes (n)	Number of passes per match during the sports season
Pass completion (%)	Pass success percentage per match during the sports season
Short passes (n)	Number of short passes per match during the sports season
Long balls (n)	Number of long balls per match during the sports season
long balls accuracy (%)	Successful long ball percentage per match during the sports season
Total crosses (n)	Number of crosses per match during the sports season
Key passes (n)	Number of key passes per match during the sports season
Assists (n)	Number of assists per match during the sports season
Defending	
Tackles (n)	Number of tackles per match during the sports season
Interceptions (n)	Number of interceptions per match during the sports season
Clearances (n)	Number of clearances per match during the sports season
Shots blocked (n)	Number of blocked shots per match during the sports season
Fouls (n)	Number of fouls per match during the sports season
<Yellow card (n)	Number of yellow cards per match during the sports season
Red card (n)	Number of red cards per match during the sports season
Total saves (n)	Number of saves by the goalkeeper per match during the sports season
Contextual variable	
Match location	Playing at home or away

RESULTS

Overall match technical performance comparison

Table 3 presents the results of comparing high-ranked, medium-ranked, and low-ranked EPL teams in overall technical performance.

For attacking and goal scoring variables, High-ranked teams outperformed medium-ranked and low-ranked teams in most attacking variables ($p < .05$), except the number of shots from counter-attacks, which was

similar across all groups (p > .05). No significant differences were observed between medium-ranked and low-ranked teams in all attacking and goal scoring variables (p > .05).

Table 3. Differences in overall match technical performance between high-ranked, medium-ranked, and low-ranked teams.

Variables	Mean ± SD			F	*p*	ηp²
	High-ranked	Medium-ranked	Low-ranked			
Attacking and goal scoring						
Total goals (n)	78.38 ± 12.05 b c	52.20 ± 8.00 a	40.88 ± 5.26 a	29.02	**<.001**	0.77
Goals per game (n)	2.06 ± 0.32 b c	1.35 ± 0.20 a	1.08 ± 0.11 a	30.13	**<.001**	0.78
Total shots (n)	16.05 ± 1.61 b c	12.17 ± 0.58 a	11.33 ± 0.69 a	37.21	**<.001**	0.81
Shots on target (n)	5.83 ± 0.53 b c	4.28 ± 0.33 a	3.75 ± 0.28 a	46.46	**<.001**	0.85
Shots off target (n)	5.60 ± 0.53 b c	4.48 ± 0.19 a	4.41 ± 0.32 a	21.01	**<.001**	0.71
Shots from open play (n)	11.35 ± 1.33 b c	8.09 ± 0.70 a	7.36 ± 0.57 a	33.26	**<.001**	0.80
Shots from counters (n)	0.61 ± 0.10	0.55 ± 0.09	0.48 ± 0.06	2.97	.07	0.26
Goal efficiency (%)	12.85 ± 1.30 b c	11.15 ± 1.33 a	9.55 ± 0.94 a	10.90	**<.001**	0.56
Passing and organizing						
Possession (%)	58.92 ± 4.57 b c	48.26 ± 2.06 a c	42.56 ± 1.86 a b	46.67	**<.001**	0.85
Total passes (n)	563.55 ± 69.44 b c	434.45 ± 25.81 a	386.31 ± 35.49 a	24.74	**<.001**	0.74
Pass completion (%)	85.73 ± 2.14 b c	80.50 ± 1.30 a c	75.86 ± 1.29 a b	57.48	**<.001**	0.87
Short passes (n)	516.56 ± 69.48 b c	379.99 ± 28.62 a c	330.06 ± 37.79 a b	26.07	**<.001**	0.75
Long balls (n)	46.85 ± 1.39 b c	54.47 ± 3.84 a	56.26 ± 2.92 a	16.69	**<.001**	0.66
long balls accuracy (%)	52.09 ± 5.19 b c	44.13 ± 2.24 a	40.35 ± 2.85 a	17.46	**<.001**	0.67
Total crosses (n)	18.55 ± 1.28 c	17.35 ± 0.92	16.51 ± 1.35 a	4.57	**.02**	0.35
Key passes (n)	12.32 ± 1.17 b c	8.97 ± 0.52 a	8.21 ± 0.57 a	47.84	**<.001**	0.85
Assists (n)	1.45 ± 0.23 b c	0.91 ± 0.15 a	0.72 ± 0.11 a	28.98	**<.001**	0.77
Defending						
Tackles (n)	15.53 ± 1.42 b c	17.30 ± 0.82 a	17.99 ± 1.16 a	7.65	**.004**	0.47
Interceptions (n)	7.95 ± 0.84 b c	9.06 ± 0.32 a	9.77 ± 0.30 a	18.17	**<.001**	0.68
Clearances (n)	14.97 ± 2.58 b c	19.67 ± 1.24 a	21.5 ± 1.40 a	21.53	**<.001**	0.72
Shots blocked (n)	2.86 ± 0.61 b c	3.91 ± 0.36 a	4.19 ± 0.44 a	13.33	**<.001**	0.61
Fouls (n)	10.30 ± 1.08	10.63 ± 0.55	11.01 ± 0.32	1.54	.24	0.15
Yellow card (n)	1.72 ± 0.33	1.91 ± 0.13	1.98 ± 0.21	1.94	.17	0.19
Red card (n)	0.05 ± 0.01	0.06 ± 0.03	0.07 ± 0.02	1.40	.27	0.14
Total saves (n)	2.46 ± 0.47 b c	3.25 ± 0.24 a	3.28 ± 0.18 a	13.12	**<.001**	0.61

Note. a: significant different to high-ranked teams (p < .05); b: significant different to medium-ranked teams (p < .05); c: significant different to low-ranked teams (p < .05)

Regarding passing and organizing variables, High-ranked teams performed better than medium-ranked teams in most passing and organizing variables (p < .05), except for the number of total crosses (p > .05). High-ranked teams also outperformed low-ranked teams in all variables (p < .05). The number of long balls was higher in medium-ranked and low-ranked teams compared to high-ranked teams (p < .05). No significant differences were observed between medium-ranked and low-ranked teams in most variables (p > .05), except for ball possession, pass completion, and the number of short passes, which were higher in medium-ranked teams.

The defending variables showed significant differences in most defending variables (p < .05), with medium-ranked and low-ranked teams outperforming high-ranked teams. The number of fouls, yellow cards, and red cards showed no significant differences between all groups (p > .05).

Table 4. Comparison between home and away technical performance in each group.

Variables	High-ranked				Medium-ranked				Low-ranked			
	Home	Away	*p*	Cohen's d	Home	Away	*p*	Cohen's d	Home	Away	*p*	Cohen's d
	Mean ± SD				Mean ± SD				Mean ± SD			
Attacking and goal scoring												
Total Goals (n)	44.16 ± 7.33	34.22 ± 4.94	.020*	1.59	28.87 ± 4.98	23.37 ± 3.25	.020*	1.30	21.72 ± 3.59	19.11 ± 2.91	.197	0.79
Goals per game (n)	2.32 ± 0.40	1.80 ± 0.27	.027*	1.52	1.51 ± 0.25	1.22 ± 0.17	.017*	1.30	1.13 ± 0.18	1.01 ± 0.15	.224	0.72
Total shots (n)	17.95 ± 1.76	14.16 ± 1.74	.004**	2.16	13.34 ± 0.79	11.13 ± 0.65	.000***	3.05	12.35 ± 0.72	10.15 ± 0.68	.000***	3.14
Shots on target (n)	6.43 ± 0.59	5.25 ± 0.64	.008**	1.91	4.65 ±0.51	3.93 ± 0.19	.002**	1.87	4.07 ± 0.24	3.39 ± 0.32	.002**	2.40
Shots off target (n)	6.26 ± 0.56	4.93 ± 0.58	.003**	2.33	4.90 ± 0.31	4.11 ± 0.24	.000***	2.84	4.90 ± 0.42	3.85 ± 0.25	.000***	3.03
Shots from open play (n)	12.57 ± 1.51	10.12 ± 1.34	.014*	1.71	8.93 ± 0.88	7.42 ± 0.67	.002**	1.93	7.99 ± 0.55	6.43 ± 0.42	.000***	3.18
Shots from counters (n)	0.66 ± 0.14	0.55 ± 0.12	.182	0.84	0.60 ± 0.11	0.50 ±0.14	.170	0.79	0.51 ± 0.10	0.50 ± 0.09	.925	0.10
Goal efficiency (%)	13.05 ± 2.09	12.73 ± 0.96	.740	0.19	11.34 ± 1.50	11.00 ± 1.59	.668	0.21	9.26 ± 1.59	9.96 ± 1.51	.450	0.43
Passing and organizing												
Possession (%)	59.77 ± 4.74	57.40 ± 4.88	.413	0.49	48.65 ± 2.91	47.67 ± 2.79	.543	0.34	44.33 ± 2.44	41.60 ± 2.50	.086	1.10
Total passes (n)	573.02 ± 72.17	554.09 ± 67.66	.649	0.27	449.17 ± 23.33	435.10 ± 25.00	.264	0.58	383.30 ± 21.72	368.85 ± 13.65	.198	0.79
Pass completion (%)	86.23 ± 2.17	85.20 ± 2.06	.000***	0.48	80.80 ± 1.52	80.17 ± 1.83	.354	0.37	76.19 ± 1.44	75.43 ± 1.50	.247	0.51
Short passes (n)	526.67 ± 72.64	506.75 ± 67.46	.633	0.28	395.62 ± 23.87	380.86 ± 26.72	.264	0.58	326.70 ± 22.69	311.40 ± 13.91	.189	0.81
Long balls (n)	46.34 ± 1.92	47.33 ± 1.62	.356	0.55	53.55 ± 3.32	53.81 ± 3.31	.877	0.07	56.61 ± 1.39	57.43 ± 1.64	.374	0.53
long balls accuracy (%)	53.71 ± 5.71	50.54 ± 4.84	.324	0.59	45.62 ± 1.58	44.11 ± 2.53	.177	0.71	40.69 ± 1.16	38.73 ± 2.19	.081	1.11
Total crosses (n)	20.38 ± 1.75	16.07 ± 1.70	.002**	2.49	19.09 ± 1.15	15.58 ± 0.95	.000***	3.32	18.36 ± 1.63	14.73 ± 1.61	.003**	2.24
Key passes (n)	13.74 ± 1.23	10.90 ± 1.27	.003**	2.27	9.86 ± 0.79	8.20 ± 0.62	.000***	2.33	8.85 ± 0.59	7.36 ± 0.44	.000***	2.86
Assists (n)	1.62 ± 0.34	1.30 ± 0.12	.058	1.25	0.99 ± 0.22	0.85 ± 0.11	.140	0.80	0.76 ± 0.13	0.66 ± 0.12	.201	0.79
Defending												
Tackles (n)	15.38 ± 1.78	15.68 ± 1.32	.748	0.19	17.23 ± 0.91	17.41 ± 0.58	.646	0.23	17.55 ± 0.79	18.31 ± 1.22	.226	0.73
Interceptions (n)	7.82 ± 0.81	8.11 ± 0.94	.589	0.33	8.81 ± 0.23	9.23 ± 0.37	.019*	1.36	9.92 ± 0.35	9.78 ± 0.28	.472	0.44
Clearances (n)	13.01 ± 2.29	16.94 ± 2.89	.026*	1.50	17.83 ± 1.10	21.08 ± 1.19	.000***	2.83	19.97 ± 1.31	23.60 ± 1.21	.000***	2.87
Shots blocked (n)	2.43 ± 0.62	3.31 ± 0.60	.032*	1.44	3.46 ± 0.53	4.20 ± 0.42	.008**	1.54	4.31 ± 0.77	4.71 ± 0.71	.376	0.54
Fouls (n)	10.16 ± 1.05	10.43 ± 1.25	.699	0.23	10.45 ± 0.66	10.81 ± 0.55	.267	0.59	10.78 ± 0.52	11.26 ± 0.51	.142	0.93
Yellow card (n)	1.59 ± 0.37	1.83 ± 0.30	.251	0.71	1.76 ± 0.10	2.06 ± 0.21	.003**	1.82	1.87 ± 0.24	2.07 ± 0.20	.160	0.90
Red card (n)	0.07 ± 0.02	0.06 ± 0.03	.765	0.39	0.07 ± 0.03	0.07 ± 0.02	1.000	0.00	0.07 ± 0.04	0.08 ± 0.04	.828	0.25
Total saves (n)	2.26 ± 0.40	2.68 ± 0.59	.179	0.83	2.95 ± 0.28	3.49 ± 0.35	.004**	1.70	3.03 ± 0.14	3.58 ± 0.22	.000***	2.98

*Note. * p < .05 ; ** p < .01 ; *** p < .001.*

Home vs. away technical performance comparison

Table 4 represents the comparison between home and away technical performance in each group. For high-ranked teams, the results showed that total goals, goals per game, total shots, shots on target, shots off target, shots from open play, total crosses, and key passes were significantly greater at home compared to away ($p < .05$). In contrast, clearances, shots blocked and pass completion were significantly greater away ($p < .05$). Other variables showed no significant differences ($p > .05$).

As for mid-ranked teams, the results showed that total goals, goals per game, total shots, shots on target, shots off target, shots from open play, total crosses, and key passes were significantly greater at home compared to away ($p < .05$). In contrast, pass completion, interceptions, clearances, shots blocked, yellow cards, and total saves were significantly greater away ($p < .05$). Other variables showed no significant differences ($p > .05$).

Regarding low-ranked teams, the results showed that total shots, shots on target, shots off target, shots from open play, total crosses, and key passes were significantly greater at home compared to away ($p < .05$). In contrast, pass completion, clearances, and total saves were significantly greater away ($p < .05$). Other variables showed no significant differences ($p > .05$).

The variables that showed no significant differences when comparing home and away performance across all groups were shots from counter-attacks, goal efficiency, possession, total passes, short passes, long balls, assists, long ball accuracy, tackles, fouls, and red cards ($p > .05$).

DISCUSSION

The purpose of this study was to compare the technical performance among high-ranked, medium-ranked, and low-ranked teams over three consecutive seasons of the EPL, and to compare the technical performance at home and away for each group. The main findings of the study indicated that high-ranked teams outperformed medium-ranked and low-ranked teams in most attacking, goal-scoring, passing, and organizing variables, except for shots from counters, which were similar across all groups, and the number of long balls, which was higher in both medium-ranked and low-ranked teams. Medium-ranked teams outperformed low-ranked teams in possession, pass completion, and the number of short passes. For defending variables, the study indicated that medium-ranked and low-ranked teams had higher performance than high-ranked teams in most defending variables, except for fouls and yellow and red cards, which were similar across all groups.

The study also showed that all groups performed differently at home and away in total shots, shots on target, shots off target, shots from open play, crosses, key passes, and clearances. It further indicated that high-ranked and medium-ranked teams performed differently at home and away in terms of total goals, goals per game, and shots blocked. Medium-ranked and low-ranked teams performed differently at home and away in total saves. Only medium-ranked teams performed differently at home and away in interceptions and yellow cards, while high-ranked teams differed in pass completion.

Overall match technical performance

Variables related to attacking and goal scoring

High-ranked teams excelled in most attacking and goal-scoring variables, represented by total goals, goals per match, total shots, shots on target, shots off target, shots from open play, and goal efficiency, except one variable: shots from counterattacks. In soccer, scoring goals is the primary indicator of success, as a team is considered the winner if it scores more goals than the opposing team. Scoring goals results from shots on

target, an area where successful teams often outperform less successful teams (Castellano et al., 2012; Liu et al., 2015; Andrzejewski et al., 2022; Prieto-González et al., 2024). Based on the results in Table 03, researchers found a relationship between the number of goals scored and the total shots taken by high-ranked, medium-ranked, and low-ranked teams. The results showed that high-ranked teams had the highest goal-scoring rate, more shots on target, and a better shot-to-goal conversion rate compared to medium- and low-ranked teams. This aligns with previous findings, which confirm that shot quality contributes more to success than the total number of shots (Yue et al., 2014; Lepschy et al., 2021). Shots from counterattacks, however, was the only attacking variable that did not significantly impact team success. This can be attributed to the low frequency of shots from counterattacks compared to open play, due to the recent change in the EPL's playing style from direct play to possession-based play, especially among high-ranked teams (Barnes et al., 2014; Bush et al., 2015; Bradley et al., 2016). Nonetheless, numerous studies have shown that shots from counterattacks can be a success factor in soccer (Liu et al., 2015; Lepschy et al., 2021).

Variables related to passing and organizing

For passing and organizing variables, high-ranked teams' dominance in most passing and organizing variables, such as possession, total passes, short passes, long ball accuracy, pass completion, total crosses, key passes, and assists reflects their ability to maintain possession, build play from the back, and move the ball in the opponent's half to create scoring opportunities compared to using long balls, which are typically less accurate. This suggests that ball possession is an important indicator of team success, as Jones et al. (2004) confirmed that successful teams in the EPL had significantly higher possession rates than less successful teams. Bradley et al. (2014) also reported that dominant European teams adopted a possession-based, indirect style of play, preferring to control the game through short passes. Similarly, research conducted in the Spanish League in 2008/2009 found significant differences in ball possession between the league leaders and mid- to low-ranked teams, with high-ranked teams performing well in terms of possession (Lago-Peñas et al., 2010). This is also confirmed by Andrzejewski et al. (2022), who studied two consecutive seasons of the Bundesliga, and they found that high-ranked teams outperformed medium-ranked and low-ranked teams in terms of ball possession.

Regarding the number of long balls, medium- and low-ranked teams outperformed high-ranked teams. This prevalence of long balls among these teams can be attributed to their difficulty in building play from the back and relying on short passes, which contrasts with more effective tactical dimensions. Starting team possession from defensive zones rather than from midfield areas is considered more effective for team success (Aranda-Malavés et al., 2024). These results may also reflect a lack of skill quality among players on these teams, as evidenced by the fact that high-ranked teams had better accuracy in long balls, showing that quality outweighs quantity. This finding aligns with previous research by Gollan et al. (2018), which demonstrated that lower-ranked teams in the EPL perform poorly in established offense, transitions to offense, and transitions to defence, all of which involve ball possession, quality in short and long passes, and key passes.

Variables related to defending

For defending variables, medium- and low-ranked teams outperformed high-ranked teams in tackles, interceptions, clearances, shot blocks, and total saves. This aligns with previous findings, as less successful teams generally display more defensive activity than successful teams (Andrzejewski et al., 2022; Kessouri, 2023). Although defensive variables can sometimes indicate success in football (Lepschy et al., 2021; Andrzejewski et al., 2022), they also reflect the high number of scoring opportunities faced by medium- and low-ranked teams. Shot blocks suggest that these teams face more shots compared to high-ranked teams,

while clearances align with findings regarding long balls, as medium- and low-ranked teams tend to favour direct play and avoid building from the back.

As for fouls, yellow cards, and red cards, these variables were not indicators of success or failure in the EPL, as all groups performed similarly in these variables. This differs from previous results in various leagues and tournaments (Yi et al., 2019; Kubayi & Toriola, 2022; Andrzejewski et al., 2022).

Home vs. away technical performance

Based on the results of Table 4, it is evident that high-ranked, medium-ranked, and low-ranked teams performed better at home compared to away matches in terms of total shots, shots on target, off target shots, shots from open play, total crosses, and key passes. This finding is consistent with previous research, which has demonstrated that playing at home is a significant factor in creating opportunities and scoring goals (Carmichael, & Thomas, 2005; Lago-Peñas, & Lago-Ballesteros, 2011; Diana et al., 2017). On the other hand, all three categories of teams made more clearances away from home compared to at home. This can be attributed to facing more scoring opportunities from the home teams, especially since playing away is characterized by a change in game tactics compared to those used at home. As a result, the visiting team is more likely to concede scoring opportunities due to their inability to predict and respond appropriately to opponent tactics (Diana et al., 2017).

Moreover, high-ranked teams performed more successful passes when playing at home. This is consistent with the study of Lago-Peñas and Lago-Ballesteros (2011). On the contrary, pass completion for medium-ranked teams and low-ranked teams was similar in both home and away, and this is in contrast with previous findings (Lago-Peñas, & Lago-Ballesteros, 2011, Liu, 2015). The authors base the results obtained in this study on what was demonstrated by Taylor et al. (2010), who found that the number of passes at the defensive third of the pitch is higher when playing away compared to home matches in EPL. These passes have a high probability of completion. This is what researchers see as appropriate to explain the similarity in pass completion, whether at home or away, for these teams. Another reason for these results could be that these teams perform similarly both at home and away, with this performance being weaker compared to that of high-ranked teams, as demonstrated in the comparison of overall technical performance.

In terms of total goals and goals per match, both were higher for high-ranked and medium-ranked teams at home compared to away, whereas low-ranked teams showed similar figures both at home and away. This is consistent with previous findings, where low-ranked teams in Spanish La Liga score similarly in both home and away matches (Lago-Peñas, & Lago-Ballesteros, 2011). This indicates that the teams in the lower ranks find it difficult to score goals, both at home and away. This also aligns with what this study found in the overall technical performance comparison when high-ranked and medium-ranked teams score more goals than low-ranked teams. A similar trend was observed with blocked shots, as low-ranked teams had a similar number of blocked shots both at home and away due to conceding a large number of scoring chances in both contexts. In contrast, high-ranked and medium-ranked teams blocked more shots only when playing away.

As for total saves, high-ranked teams made fewer saves than the other teams both at home and away, while medium-ranked and low-ranked teams made more saves away from home. This can be explained by the fact that high-ranked teams face fewer shots on target, both at home and away, compared to other teams. Regarding interceptions and yellow cards, medium-ranked teams made more interceptions and received more yellow cards when playing away, unlike high-ranked and low-ranked teams. This indicates that these teams tend to be more defensive and physically aggressive tactics often employed in away matches. Away teams may face more pressure and challenges from the home team (Diana et al., 2017).

On the other hand, the performance of high-ranked, medium-ranked, and low-ranked teams was similar both at home and away in variables such as shots from counter-attacks, goal efficiency, possession, total passes, short passes, long balls, long ball accuracy, assists, tackles, fouls, and red cards. Therefore, these variables were not decisive factors contributing to superiority at home.

Limitations and future investigations

The present study focused on comparing the technical performance based on the final ranking of teams over three consecutive seasons of the EPL, as well as comparing the technical performance of these teams according to match location. Although several technical variables were included, some other variables were not addressed. Additionally, match performance depends on physical, tactical, and technical aspects. Therefore, it would be beneficial for future investigations to explore the physical and tactical performance of the EPL.

CONCLUSION

This study compared the technical performance of EPL teams according to their final rankings over three consecutive seasons, as well as comparing this technical performance at home and away for these teams. The study found that high-ranked teams excelled in most attacking, goal-scoring, organizing, and passing variables, except shots from counterattacks, which were similar across the three groups (high-ranked, medium-ranked, and low-ranked), and long balls, which were less frequent among high-ranked teams. This suggests that high-ranked teams favour possession-based play, while the other two categories rely more on direct play. Defensive variables favoured medium- and low-ranked teams, indicating that they faced more scoring opportunities against them.

The study also highlighted that playing at home versus away was an important variable, with all three groups sharing several common variables: total shots, shots on target, shots off target, shots from open play, crosses, key passes, and clearances. However, pass completion was the only variable where high-ranked teams at home outperformed the other groups. Based on these findings, researchers recommend adopting modern tactical approaches and recruiting skilled players suited to such tactics to secure a top position in the EPL.

AUTHOR CONTRIBUTIONS

Yacine Belfrites contributed to conceptualization, methodology, writing original draft preparation, writing review and editing, and overall supervision of the manuscript. Oussama Kessouri contributed to data collection, statistical analysis, interpretation of results, and writing discussion. Walid Grine contributed to data collection, theoretical framework development, and writing discussion. All authors have read and approved the final version of the manuscript and agree to be accountable for its content.

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