A CONTEXTUAL EXAMINATION OF PHYSICAL AND TECHNICAL PERFORMANCE VARIATIONS IN PROFESSIONAL SOCCER

Koray Biber[1], Ömür Serdal Altunsöz[2], and Mustafa Söğüt[1]

[1]Department of Physical Education and Sports, Faculty of Education, Middle East Technical University, Ankara, Turkey
[2]National Team Coach, Turkish Football Federation, İstanbul, Turkey

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Abstract:

The purpose of this study was to analyse the variations in physical and technical performance parameters of professional soccer players according to match outcome (winning, drawing, or losing) and team quality (top-, middle-, and bottom-ranked). The data were collected from 122 matches of the Turkish Super League during the 2019-2020 season using the semi-automatic multi-camera tracking system. The results revealed that the winning teams performed more high-intensity running activities, particularly when in ball possession, and produced higher number of shots on target. The distance covered in high-intensity running and sprinting when in ball possession, as well as the number of successful crosses, shots on target, corner kicks, and short passes were greater in top-ranked teams. The coaches, performance analysts, and practitioners should consider performance parameters that are influenced by contextual variables before designing training programmes and match evaluations.

Keywords: *football, contextual variables, match analysis, match running, match variables*

Introduction

Match analysis is widely accepted as an efficient feedback strategy in soccer (Drust, 2010). It does not only indicates the strengths and weaknesses of a team (Castellano, Casamichana, & Lago, 2012) but also plays an essential role in determining key performance indicators as has been well documented in several studies (Alves, et al., 2019; Andrzejewski, Konefał, Chmura, Kowalczuk, & Chmura, 2016; Carling, 2011; Castellano, et al., 2012; García-Rubio, Gómez, Lago-Peñas, & Ibáñez Godoy, 2015; Hoppe, Slomka, Baumgart, Weber, & Freiwald, 2015; Lago-Peñas & Lago-Ballesteros, 2011; Liu, T., García-De-Alcaraz, Zhang, L., & Zhang, Y., 2019; Rampinini, Impellizzeri, Castagna, Coutts, & Wisløff, 2009; Taylor, Mellalieu, James, & Shearer, 2008; Zhou, Zhang, Lorenzo Calvo, & Cui, 2018).

Earlier studies indicated that more successful teams performed a greater number of short passes, successful short passes, tackles, shots, and shots on target compared to less successful teams in the Italian Serie A (Rampinini, et al., 2009), Spanish La Liga (Lago-Peñas, Lago-Ballesteros, Dellal, & Gómez, 2010), UEFA Champions League (Lago-Peñas, Lago-Ballesteros, & Rey, 2011), FIFA World Cup 2014 (Liu, H., Gomez, Lago-Peñas, & Sampaio, 2015; Yi, et al., 2019), and Chinese Super League (Zhou, et al., 2018). However, the number of crosses, dribbles, shots blocked, and red cards were more related to losing teams (Liu, H., et al., 2015). The findings from the German Bundesliga (Hoppe, et al., 2015) and Italian Serie A (Rampinini, et al., 2009) suggested that high-speed running activities with ball possession were related to success, whereas total distance covered, and the number of high-speed running activities were not related to success. Accordingly, Aquino et al. (2019) found that total distance covered did not differ among successful and unsuccessful teams during FIFA World Cup 2018. In contrast, findings from the English Premier League (Di Salvo, Gregson, Atkinson, Tordoff, & Drust, 2009) indicated that high-intensity running distance in ball possession was not related to team success. Further, total distance covered at high-intensity running, sprinting distance, and high-intensity running distance without ball possession were significantly higher in lower ranked teams compared to higher ranked teams in English Premier League (Di Salvo, et al., 2009).

Several studies suggested that performance parameters were influenced by the quality of opposition (Taylor, et al., 2008; Teixeira, et al., 2021). For instance, Aquino et.al (2021) found that top-ranked teams covered greater distance while playing against top-ranked teams compared to lower-ranked teams in the Brazilian Second Division League. Additionally, similar results were reported in two separate studies across the Spanish La Liga (Castellano, Blanco-Villaseñor, & Álvarez, 2011; Lago, Casais, Dominguez, & Sampaio, 2010). Also, findings from one of the major European national league (Rampinini, Coutts, Castagna, Sassi, & Impellizzeri, 2007) demonstrated that the distance covered at high-intensity running was greater as the quality of opposition increased, as compared to lower-ranked opponents.

The great majority of the performance analysis related studies investigated the higher ranked leagues in Europe such as the English Premier League (Bradley, et al., 2011), Spanish La Liga (Oliva-Lozano, Rojas-Valverde, Gómez-Carmona, Fortes, & Pino-Ortega, 2021), Italian Serie A (Rampinini, et al., 2009), German Bundesliga (Vogelbein, Nopp, & Hökelmann, 2014), French Ligue 1 (Carling, 2011) or high-level international tournaments such as UEFA Champions League (Lago-Peñas, et al., 2011), and FIFA World Cup (Liu, H., et al., 2015). To the best of the authors' knowledge, there is limited evidence across lower-ranked leagues such as the Turkish Super League, which is ranked 20th based on the UEFA Country Coefficients. Variations in team performance can be observed according to the type of competition, from both the between- and within-team aspects (Gómez, Lago-Peñas, & Pollard, 2013). Given that the majority of previous research has focused on higher-ranked leagues, examining performance variations in a lower-ranked league offers valuable insights into whether similar contextual patterns exist in lower-tier competitions, thereby enhancing the generalizability and practical value of performance analysis across various levels of play. Therefore, this study aimed to investigate the variations in physical and performance parameters of elite soccer players in Turkish Super League in relation to match outcome and team quality.

Methods

Data collection

Turkish Super League is the top-tier level of soccer in Turkish Association Football. In the 2019-2020 season, a total of 306 matches were played by 18 teams that competed against each other twice, at home and away, during the 34 match-days. The available data were provided by Sentio Sports Analytics Company, who collected data from 122 of the 306 matches by utilizing a semi-automatic multi-camera tracking system. Sentiscope was experimented several times in official soccer matches during its evolution and it was chosen for its effectiveness compared to other multiple object tracking methods (Baysal & Duygulu, 2015). To collect the data, two 4K cameras were installed close to the midline of the pitch, as high as possible, and calibrated to the field prior to the kick-off. The written consent was received from the Sentio Sports Analytics Company to use their data.

Sample and procedures

Ethics committee (Human Subjects Ethics Committee) approval was received from the Middle East Technical University (approval number: 425-ODTU-2021). Variations in physical and technical performance parameters of elite soccer players were investigated in relation to two different contextual variables, i.e., match outcome and team quality. With respect to the match outcomes, data from 85 winning and losing teams, and 74 draws were collected. Regarding the second contextual variable, team quality, the teams were categorized as the top (data from teams ranked 1-6, n=80), middle (data from teams ranked 7-12, n=89), and bottom (data from teams ranked 13-18, n=75) according to their final ranking at the end of the season.

Variables

A total of 12 physical and 15 technical performance parameters were selected as dependent variables, similar to previous studies (Alves, et al., 2019; Gai, Leicht, Lago, & Gómez, 2019; Harrop & Nevill, 2014; Konefał, et al., 2020; Kubayi & Toriola, 2020; Lago-Peñas, et al., 2010; Liu, H., Gómez, Gonçalves, & Sampaio, 2016; Rampinini, et al., 2007; Yang, Leicht, Lago, & Gómez, 2018; Yi, et al., 2019; Zhou, et al., 2018). The independent variables were classified as two groups: (1) match outcome (winning, losing, and drawing) and (2) team quality (top, middle, and bottom). The operational definitions of performance variables are presented in Table 1 (Zhou, et al., 2018).

Statistical analysis

Descriptive statistics for match outcome and team quality were computed and shown in Table 2 and Table 3, respectively. All values were reported as means and standard deviations. Normality is an inherent assumption in parametric tests such as the one-way analysis of variance (ANOVA) (Gravetter & Wallnau, 2017). Since each sample size included sufficient observations (n>30) in this study, the violation of normality assumption should not have caused a major problem as previously reported by Ghasemi and Zahediasl (2012). One-way ANOVA was used to examine the variations in physical and technical performance parameters of soccer players

Table 1. Operational definitions of variables

Total distance (TD): The sum of covered distance in meters by all the team players.
High-intensity distance (HID): The sum of covered distance in meters at speed between 20km/h and 24km/h by all the team players.
Sprint distance (SD): The sum of covered distance in meters at the speed over 24km/h by all the team players.
Number of high-intensity runs (NHIR): Number of running in a match at a speed between 20km/h and 24km/h by all the team players.
Number of sprints (NS): Number of sprinting by all the team players.
Average speed (AS): Average speed of running, walking, and jogging performed by all the team players.
Total distance in possession (TDP): The sum of covered distance in meters when in ball possession by all the team players.
Total distance out of possession (TDOP): The sum of covered distance in meters when out of ball possession by all the team players.
High-intensity distance in possession (HIDP): The sum of covered distance in meters when in ball possession at speed between 20km/h and 24km/h by all the team players.
High-intensity distance out of possession (HIDOP): The sum of covered distance in meters when out of ball possession at speed between 20km/h and 24km/h by all the team players.
Sprint in possession (SP): The sum of covered distance in meters at the speed over 24km/h when in ball possession by all the team players.
Sprint out of possession (SOP): The sum of covered distance in meters at the speed over 24km/h when out of ball possession by all the team players.
Successful passes (SUCP): Number of the balls played between teammates without interruption.
Unsuccessful passes (UNSUCP): Number of failed attempts to play the ball between teammates.
Long passes (LP): Number of the balls played over more than 30 meters between teammates without interruption.
Short passes (SHP): Number of the balls played over less than 30 meters between teammates without interruption.
Average pass length (AVPL): The mean length of successful passes.
Shots on target (SOT): An attempt to score a goal that required the intervention to stop it going in or resulted in a goal/shot which would go in without being diverted.
Shots off target (SOFT): An attempt to score a goal, made with any (legal) part of the body, off target.
Successful crosses (SUCC): Any ball sent into the opposition team's area from a wide position that meets with a teammate.
Unsuccessful crosses (UNSUCC): Any ball sent from the wide position targeting the teammate which is failed.
Corner (COR): Ball goes out of play for a corner kick.
Fouls committed (FC): Any infringement that is penalised as foul play by a referee.
Yellow cards (YC): Where a player was shown a yellow card by the referee for reasons of foul, persistent infringement, hand ball, dangerous play, time wasting, etc.
Red cards (RC): It is shown by the referee to remove a player from the game either directly or in consequence of a second yellow card.
Offside (OFF): Being caught in an offside position resulting in an indirect free-kick to the opposing team.
Possession (POS): Duration of a team's control over the ball as a proportion of the total time when the ball is in play.

according to the match outcome and team quality. The Bonferroni *post-hoc* test was applied to identify pairwise differences. To measure the effect size, eta-squared ($\eta 2$) was computed ($\eta 2 = 0.01$: small effect size, $\eta 2 = 0.06$: medium effect size, $\eta 2 = 0.14$ or higher: large effect size) (Cohen, 1988). The significance level was set at $p<.05$. The IBM SPSS Statistic for Windows, Version 25.0 (SPSS Inc., Chicago IL) was used to perform each statistical analysis.

Results

Match outcome

Descriptive statistics of physical and technical performance parameters according to match outcome and the results of ANOVA are shown in Table 2. The number of high-intensity runs (NHIR) $F(2, 241) = 4.558$, $p=.011$ was greater in the winning and losing teams than in the drawing teams. Furthermore, the average speed (AS) was

Table 2. Physical and technical performance parameters according to the match outcome

Variable	Winning (n= 85)		Losing (n= 85)		Drawing (n= 74)		*F*	*p*	η2	*Post hoc*
	M	SD	M	SD	M	SD				
Physical performance parameters										
TD (m)	108985.60	6922.11	107292.00	6756.19	108283.40	4213.27	1.619	0.200	0.013	
HID (m)	4532.86	594.19	4492.20	584.76	4309.73	565.47	3.230	0.041*	0.026	
SD (m)	2551.48	499.13	2475.95	455.12	2458.43	506.82	0.845	0.431	0.007	
NHIR	255.44	44.87	253.47	43.24	235.35	49.03	4.558	0.011*	0.036	D<W, D<L
NS	100.52	28.12	98.38	27.28	90.42	29.42	2.758	0.065	0.022	
AS (km/h)	6.43	0.30	6.31	0.28	6.30	0.27	5.004	0.007*	0.040	L<W, D<W
TDP (m)	37417.8	7087.04	35869.93	6920.13	35932.77	7404.49	1.259	0.286	0.010	
TDOP (m)	37887.61	7385.26	38748.22	7188.16	37372.24	7906.80	0.693	0.501	0.006	
HIDP (m)	1839.08	411.87	1691.68	426.55	1622.99	408.86	5.684	0.004*	0.045	D<W
HIDOP (m)	2058.14	529.54	2213.12	519.46	1946.91	513.34	5.26	0.006*	0.042	D<L
SP (m)	1273.49	360.49	1006.72	239.64	1065.70	302.09	17.805	<0.001*	0.129	L<D<W
SOP (m)	1046.44	292.03	1248.94	343.61	1102.16	303.34	9.366	<0.001*	0.072	W<L, D<L
Technical performance variables										
SUCP	352.07	105.43	342.73	87.84	326.3	107.86	1.322	0.269	0.011	
UNSUCP	80.67	13.03	83.39	13.33	89.69	18.97	7.256	0.001*	0.057	W<L<D
LP	61.06	15.11	62.81	16.5	64.15	16.11	0.757	0.470	0.006	
SHP	375.21	104.83	363.31	89.35	351.84	102.20	1.108	0.332	0.009	
AVPL	19.52	1.99	19.70	1.87	20.12	2.26	1.783	0.170	0.015	
SOT	11.07	4.20	6.98	3.44	8.16	3.73	25.905	<0.001*	0.177	L<W, D<W
SOFT	5.76	2.74	5.35	2.74	5.65	3.16	0.461	0.631	0.004	
SUCC	4.51	2.34	4.51	2.92	4.24	2.57	0.258	0.772	0.002	
UNSUCC	12.14	5.82	15.54	6.78	13.84	7.26	5.607	0.004*	0.044	W<L
COR	4.80	2.21	4.81	2.51	4.51	2.66	0.365	0.695	0.003	
FC	13.08	3.83	12.27	3.64	13.43	3.79	2.040	0.132	0.017	
YC	2.20	1.37	2.72	1.56	2.72	1.49	3.418	0.034*	0.028	
RC	0.06	0.24	0.26	0.6	0.15	0.39	4.431	0.013*	0.035	W<L
OFF	1.89	1.65	1.92	1.39	1.89	1.71	0.007	0.993	0	
POS (%)	51	8	49	8	50	9	0.494	0.610	0.004	

significantly higher in the winning teams compared to the drawing and losing teams F(2, 241) = 5.004, p=.007. The winning teams performed greater high-intensity distance coverage in possession (HIDP) than the drawing teams F(2, 241) = 5.684, p=.004. The high-intensity distance coverage out of possession (HIDOP) was greater in the losing teams compared to the drawing teams F(2, 241) = 5.26, p=.006. The sprint in possession (SP) F(2, 241) = 17.805, p=<.001 was greater in the winning teams than in the drawing and losing teams. However, the losing teams had greater sprint out of possession (SOP) F(2, 241) = 9.366, p=<.001 than the wining and drawing teams. The results of ANOVA indicated that unsuccessful passes (UNSUCP) were significantly greater in drawing teams, losing teams, and winning teams, respectively F(2, 241) = 7.256, p=.001. The number of shots on target (SOT) were greater in the winning teams than in both the losing and drawing teams F(2, 241) = 25.905, p =<.001. In addition, the losing teams had greater number of unsuccessful crosses (UNSUCC) than

Table 3. Physical and technical performance parameters according to the team quality

Variable	Top (n= 80)		Middle (n= 89)		Bottom (n= 75)		F	p	η2	*Post hoc*
	M	SD	M	SD	M	SD				
Physical performance parameters										
TD (m)	108135.40	5354.53	108282.70	6628.73	108114.3	6519.1	0.018	0.982	0	
HID (m)	4487.48	613.86	4553.48	582.67	4290.56	536.46	4.424	0.013*	0.035	B<M
SD (m)	2514.96	516.85	2564.35	479.77	2397.76	449.47	2.500	0.084	0.02	
NHIR	250.20	44.47	253.42	45.99	241.37	48.22	1.449	0.237	0.012	
NS	97.96	30.45	97.39	27.50	94.56	27.56	0.316	0.729	0.003	
AS (km/h)	6.31	0.26	6.36	0.26	6.37	0.34	0.877	0.417	0.007	
TDP (m)	37718.51	6866.12	36429.58	7745.85	35050.24	6464.09	2.745	0.066	0.022	
TDOP (m)	36849.15	7263.02	38078.43	7338.87	39235.73	7741.93	1.994	0.138	0.016	
HIDP (m)	1803.86	398.79	1773.43	440.68	1574.29	396.68	7.026	0.001*	0.055	B<T, B<M
HIDOP (m)	2054.20	526.11	2154.89	510.6	2013.43	552.89	1.58	0.208	0.013	
SP (m)	1180.33	333.06	1150.28	304.82	1011.72	318.81	6.161	0.002*	0.049	B<T, B<M
SOP (m)	1096.01	305.97	1190.06	361.57	1107.61	291.80	2.139	0.120	0.017	
Technical performance variables										
SUCP	364.26	103.8	331.64	105.28	327.29	87.46	3.283	0.039	0.027	
UNSUCP	85.74	17.56	82.11	15.76	85.53	12.66	1.462	0.234	0.012	
LP	62.99	15.42	60.75	16.55	64.40	15.55	1.107	0.332	0.009	
SHP	387.01	96.68	356.37	107.23	348.43	87.14	3.426	0.034*	0.028	B<T
AVPL	19.44	1.83	19.68	1.97	20.20	2.27	2.875	0.058	0.023	
SOT	9.99	4.24	8.61	4.06	7.64	3.95	6.487	0.002*	0.051	B<T
SOFT	6.10	2.77	5.56	3.10	5.07	2.62	2.549	0.08	0.021	
SUCC	5.24	2.80	4.47	2.50	3.51	2.25	9.065	<.0001*	0.070	B<T, B<M
UNSUCC	14.41	6.07	14.19	7.47	12.81	6.49	1.281	0.28	0.011	
COR	5.35	2.67	4.75	2.39	4	2.11	6.128	0.003*	0.048	B<T
FC	12.88	4.23	12.92	3.60	12.92	3.49	0.004	0.996	0	
YC	2.45	1.45	2.58	1.43	2.57	1.60	0.203	0.816	0.002	
RC	0.10	0.34	0.16	0.42	0.21	0.55	1.260	0.286	0.010	
OFF	1.91	1.59	1.90	1.56	1.89	1.6	0.003	0.997	0	
POS (%)	51	8	50	9	48	7	2.732	0.067	0.022	

the winning teams F(2, 241) = 5.607, p=.004. Moreover, the losing teams received significantly more red cards (RC) than the winning teams F(2, 241) = 4.431, p=.013.

Team quality

According to the ANOVA results, presented in Table 3, the following physical performance parameters were higher in the middle-ranked teams than in the bottom-ranked teams: HID F(2, 241) = 4.424, p=.013; HIDP F(2, 241) = 7.026, p=.001; SP F(2, 241) = 6.161, p=.002. Additionally, HIDP and SP were significantly higher in the top-ranked teams compared to the bottom-ranked teams. The results also indicated that the top-ranked teams had significantly greater mean values in several technical performance parameters including SHP F(2, 241) = 3.426, p=.034, SOT F(2, 241) = 6.487, p=.002, SUCC F(2, 241) = 9.065, p=<.001, and COR F(2, 241) = 6.128, p=.003 than the bottom-ranked teams.

In addition, the middle-ranked teams had significantly higher number of SUCC than the bottom-ranked teams.

Discussion and conclusion

The aim of the present study was twofold: a) to identify the variations of physical and b) technical performance variables according to the match outcome and team quality in elite soccer players competing in the Turkish Super League. The results of the study suggested that physical and technical performance parameters can vary in relation to the contextual variables, i.e., match outcome and team quality in elite soccer. The mean average speed was significantly higher in the winning teams. The distance covered in ball possession with high-level activities such as sprinting and high-intensity running was greater in the winning teams, while ball possession was not different according to the match outcome. Contrary, the losing teams covered greater distance in sprinting when out of ball possession. These findings were consistent with results from the Chinese Super League (Zhou et al., 2018). The results of the current study indicated that winning depends not only on higher speed but also on the ability to perform high-intensity running and sprinting while in possession of the ball in Turkish Super League. Thus, sprinting abilities should be developed within the context of ball possession scenarios, rather than improving sprinting and high-intensity running in isolation.

Moreover, the number of shots on target was greater for the winning teams. Accordingly, previous studies from the Spanish La Liga (Lago-Peñas, et al., 2010), German Bundesliga (Yue, Broich, & Mester, 2014) and three consecutive FIFA World Cups (Castellano, et al., 2012) also found that the quality of the shots was more related to winning than the quantity of the shots. Therefore, practitioners should consider improving the shot quality in their players. An association between winning and the number of successful passes was reported in national leagues and international competitions including the Spanish La Liga (Lago-Peñas, et al., 2010), UEFA Champions League (Lago-Peñas, et al., 2011), and FIFA World Cup (Alves, et al., 2019). Similar to previous findings, the winning teams had less unsuccessful passes and crosses. Achieving more successful passes could result in more successfully completed attacks, which eventually increases the chance of scoring a goal. The RC was significantly lower in the winning teams, unsurprisingly, which was also reported previously in the Spanish La Liga (Lago-Peñas, et al., 2010) and UEFA Champions League (Lago-Peñas, et al., 2011). The winning teams in the Africa Cup of Nations 2017 (Kubayi & Toriola, 2020) had lower ball possessions, while it was higher in the winning teams than in the losing teams in UEFA Champions League (Lago-Peñas, et al., 2010). However, the results of this study showed that ball possession did not differ in relation to match outcome.

The results indicated that match performance variables, including HID, HIDP, and SP were significantly lower in the bottom-ranked teams compared to the middle-ranked teams, while the last three variables were also lower in comparison with the top-ranked teams. These findings were in line with earlier studies that examined data from Italian Serie A (Rampinini, et al., 2009) and German Bundesliga (Hoppe, et al., 2015). A previous study conducted on data from the English Premier League (Di Salvo, et al., 2009) suggested that distance covered in high-intensity running in total and when out of ball possession was significantly greater in the middle- and bottom-ranked teams. On the contrary, the present study showed that high-intensity running activities without ball possession were not significantly different among teams with different end-of-season rankings.

Furthermore, the top-ranked teams performed a greater number of SOT than the bottom-ranked teams. Thus, the results showed that the number of SOT is more important than the total shot attempts. Earlier findings from Italian Serie A (Rampinini, et al., 2009), Spanish La Liga (Liu, H., et al., 2016), and German Bundesliga (Yue, et al., 2014) also emphasized the quality of shots for success in elite soccer. Moreover, the SHP was higher in the top-ranked teams, which was in accordance with the results from Italian Serie A (Rampinini, et al., 2009). It is most likely because attempting more short passes is increasing the number of completed attacks that results in a goal. In the context of a lower-ranked league, the greater use of short passes by the top-ranked teams may also reflect superior technical ability and a more structured style of play, allowing them to dictate the tempo of the game more effectively compared to the lower-ranked teams. Other attacking related variables, SUCC and COR, were also found higher in the top-ranked teams than in the bottom-ranked teams. Several previous studies reported that the number of crosses were greater in less successful teams (Liu, Gómez, et al., 2016; Liu, Hopkins, & Gómez, 2016), while the results of the present study demonstrated that the top-ranked teams had more SUCC as compared to the bottom-ranked teams. Therefore, the findings of this study suggest that the quality of crosses rather than the quantity of crosses should be considered by practitioners.

This study has several limitations. The utilized data, from a single season (2019-2020), including a total of 122 matches, had a limited sample size which decreases the power of generalisation. Thus, future studies should include larger sample sizes. Environmental factors such as heat, stress, and altitude can also influence the performance vari-

ables in elite soccer (Trewin, Meylan, Varley, & Cronin, 2017). However, this study was conducted without taking environmental factors into account, and following studies should consider the influence of the aforementioned parameters. Finally, the 2019-2020 season of the Turkish Super League was suspended for approximately three months due to the COVID-19 pandemic. The post-pandemic period of the season was played without an audience which might have decreased the home advantage. Hence, data collected from regular seasons with fan support should be preferred.

This study investigated the variations in physical and technical performance variables of elite soccer players, in relation to match outcome and team quality. To the best of the authors' knowledge, this study is the first to enable a better understanding of soccer match analysis in the Turkish Super League. Based on the results it can be concluded that winning teams are expected to cover greater distances in ball possession using high-level running activities. They are also likely to produce a higher number of shots on target. The greater distance covered when in ball possession at high-intensity running, sprinting, and greater number of shots on target are characteristic of the best teams at the top level of soccer.

Practical implications

The coaching staff and other practitioners may consider adopting high-level running activities when in ball possession either for match strategies or training programmes to develop necessary skills in their players. In addition, the quality of shots rather than the quantity of shots should not be neglected. The results also suggest that the end-of-season ranking might be related with the number of short passes, corner kicks, successful crosses, and shots on target. Therefore, improving the accuracy of crosses as well as performing more short pass game strategies may help teams to be placed higher at the end of the season.

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Correspondence to:
Koray Biber
Department of Physical Education and Sports
Faculty of Education, Middle East Technical University
Ankara, Türkiye, 06800
E-mail: koray.biberr@gmail.com

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