

The impact of different standards of opponents on observed player performance in the English Premier League


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ABSTRACT

Redwood-Brown A, Bussell C, Bharaj HS. The impact of different standards of opponents on observed player performance in the English Premier League. *J. Hum. Sport Exerc.* Vol. 7, No. 2, pp. 341-355, 2012. The purpose of the investigation was to develop an understanding of how the performance of a soccer team is affected when playing against different standards of opponents in the English Premier League. Twenty-nine Premier League matches were analysed during the 2010-2011 season for 18 selected performance indicators. Standards of opposing teams were defined as being top, middle or bottom depending on their final league position. The participating team was categorised in the 'middle' category and eighteen players from the squad were selected to take part in the study. Comparisons (mean±SD) were made between the team's performances on selected performance indicators against teams ranked as top, middle and bottom. A one-way ANOVA analysed the team's performance behaviour along with: five positional units (centre-back, full-back, centre midfield, wide midfield, centre forward); and individual player performance behaviour. At team level, successful passes ($p=0.047$) were significantly higher against middle (84.2%) compared with top (83.8%) and bottom standard teams (83.3%). Interceptions ($p=0.016$) were also significantly higher against middle (11.2 ± 8.3) when compared with playing against top standard teams (8.4 ± 5.2). The findings suggested the team generally performed better against middle than top or bottom standard opponents. Possession/passing was highlighted as a key factor influencing the performance at team level, although no account for game state was considered. The findings suggest that differences in individual player performance are not always evident at team or unit level which previous research has failed to address. The current study has shown that player, unit and team performance changes as a function of opposition standard but must be considered in the future in relation to game state.

Key words: ABILITY, PLAYING POSITION, OPPOSITION STANDARD, COACHING

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INTRODUCTION

In recent years the identification of performance indicators has been one of the main points of focus for sports performance research in order to provide objective performance evaluations, comparisons and predictions (Hughes et al., 2002; Dunn et al., 2003; Jones et al., 2004; Taylor et al., 2004; Taylor et al., 2010). Performance indicators have been defined in various ways, with a more recent definition describing them; “as action-related variables used to provide a profile of an associated aspect of performance” (Taylor et al., 2010, p. 255). An important issue for sports science researchers and practitioners is whether profiles proposed from such research, are representative of typical performance due to the number of confounding variables that have been found to effect performance (Taylor et al., 2010). In soccer, it has been suggested that the key component of successful performance is the ability to score goals (Lago, 2005; Hughes and Franks, 2005; Lago, 2007, 2009). For example, Tenga and Larsen (2003) and Hughes and Franks (2005) found teams that won major honours (e.g. World Cup) used more ‘possession’ style play than ‘direct’ play; supporting the notion that ‘possession’ play is more effective at creating goal scoring opportunities than direct play. Hughes and Franks (2005) also found that successful teams performed a higher number of longer sequences (five to eight passes) prior to scoring a goal and a higher frequency of shots compared to unsuccessful teams. However, the score line does not necessarily give a true reflection on the team’s performances; a player, unit or team may score or concede against the run of play or score due to a lapse mistake from the opposition. Players may also have unique skills which are more likely to increase the probability of scoring which are not necessarily attributed to traditional performance success. It is for this reason that a more detailed investigation at player level is needed to understand the relationship between successful match outcomes and performance indicators.

The most popular technical performance indicator that has been investigated in the soccer literature is ball possession (Bate, 1988; Jones et al., 2004; Lago, 2007). Bate (1988) found that the higher number of possessions a team had, the greater chance of entering the attacking third of the field and creating goal scoring opportunities. Commonly, comparisons between successful and unsuccessful teams are made through the investigation of playing patterns. Hughes et al. (1988) found that successful teams tended to occupy the centre of the pitch, whereas unsuccessful teams used the wings. However, Scoulding et al. (2004) found there was very little difference in the number of passes within different areas of the pitch between successful and unsuccessful teams. Previous research has usually categorised teams as “successful” or “unsuccessful” on the basis of results in a match or their final position in a competition; where weaker teams may progress to latter stages of such tournaments due to the competition structure and paucity of matches at the expense of stronger teams (e.g. knockout stages). Therefore, teams classed as successful may not necessarily be of higher quality and vice versa (Taylor et al., 2008). This type of study design is also limited because many teams’ performances are grouped. As Taylor et al., (2008) suggested aggregate data sets potentially “mask” the factors which determine or contribute to each team’s success or failure in the competition.

It maybe suggested that a good level of consistency or general signature of playing behaviour will exist in performers (Taylor et al., 2004). If invariance can be found in the analysis of performance indicators it can aid the prediction of future performance and provide practical value for coaches. One method of investigating invariance is through performance profiles for playing positions; although some research has attempted to define the technical demands of different playing position (Dunn et al., 2003; Williams et al., 2003) it is not known how the technical demands of each playing position vary. Although some differences have been found, studies are generally limited by the number of matches sampled and the lack of reliability or validation procedures used when collecting and analysing the data. Taylor et al. (2004) expanded on the

performance profile research of Dunn et al. (2003) and Williams et al. (2003) finding roles differed across playing positions and these different roles were largely dependent on the teams playing style and the players available. However, it was suggested that research into performance profiles should not be confined to positional units but extended to individual players within each position. Taylor et al. (2005) expanded the work within behavioural profiles by incorporating spatial aspects of unit performance and found each unit performed different behaviours within all areas of the pitch. Subsequently, effective evaluation of performance indicators needs to examine the influence of potential confounding variables which have been suggested to affect the strategies and tactics teams adopt at both team and player level. Collectively, the studies above have highlighted the importance of performance profiling.

As well as positional demands, match status and match location have been identified as the confounding or situational variables associated with tactical aspects of performance (Jones et al., 2004; Tucker et al., 2005; Redwood-Brown, 2008; Taylor et al., 2008). Jones et al. (2004) and Lago (2007) analysed match status and found that teams kept the ball for longer periods of time when they were losing compared to winning; as they increase their efforts to regain possession. Lago (2009) in line with Jones et al. (2004), Bloomfield et al. (2005), and Lago (2007) concluded that strategies are influenced by match status and match location, and that teams alter their playing style according to these variables. Taylor et al. (2008) extended this notion by comparing the effects of match location, match status, and quality of opposition, upon the technical aspects of performance of a soccer team and they suggested studying situational variables in isolation may be inappropriate as they can influence performance in a collective manner. By investigating these aspects of performance collectively the coach can identify possible explanations for a change in performance and implement strategies, such as training drills, to help improve the effects of situational variables in future performances (Lago, 2007; Taylor et al., 2008). The complexity and the dynamics of actions during a soccer match can make the distinction between situational variables (e.g. standards of opponents) more difficult to identify due to the continuous flow of actions, unlike sports with separable concise actions and/or numerous breaks (Oberstone, 2009). Taylor et al. (2010) found the number of passes performed by a team differed as a function of the interaction between match location and match status. However there maybe some concern that data collected over more than one season, as in the case of this study may highlight additional inconsistencies due to the high variation found in such sports. Although attempting to examine every plausible situational variable influencing performance is impractical; due to conceptual and methodological constraints, investigating individual performance more closely may help to understand the interaction between match situation and performance. Consequently, the findings discussed make it clear that there is a need to develop alternative analysis methods for assessing and modelling performance alongside confounding variables and their performance impact.

The purpose of the current study was to investigate the effects of different standards of opponents on player performance of an English Premier League team. The recorded counts of technical performance indicators during match play were used as an indicator of player behaviour and team behaviour when playing against opposing teams categorised as either top, middle or bottom level, depending on their final league position. Performance profiles were constructed and analysed for team, positional units and individual players to highlight general to specific patterns of performance behaviour in relation to the standard of opposition.

MATERIAL AND METHODS

An English Premier League club provided formal consent to participate in this study. Eighteen ($n=18$) 1st team players were recruited from the club. In line with Hughes et al., (2001) players were selected if they had played in at least 7 games to ensure a representative profile for each performance indicator was achieved. Twenty-nine ($n=29$) matches during 2010-2011 Premier League season (fourteen home and fifteen away) were analysed. The club's first team coach validated the key performance indicators ($n=18$) and players' positional units ($n=5$). All performance indicator definitions were directly sourced from ProZone® User Guide, Definitions and Logic, Version: 10.0 (ProZone® Sports Ltd, 2002). Similar to the work of Taylor and colleagues (2010) a case study approach was adopted to identify stable or consistent patterns of performance across the analysed matches.

Standard of opposition was defined by the oppositions final league position; top, middle or bottom. Top teams were categorised as top six; finishing 1st - 6th in the league, middle eight; finishing 7th - 14th in the league, and bottom six; finishing 15th - 20th in the league. Performance indicators were categorised into three areas; defence, attack and distribution. In line with previous research (Taylor et al., 2004) players were placed into five positional units centre back (CB), full back (FB), centre midfield (CM), wide midfield (WM) and centre forward (CF) and verified by the players management and coaching team. The analysed team ("criterion") finished in the middle eight in the league and were therefore categorised as a middle standard team. The 'criterion' played eight matches against top rated teams, ten matches against middle, and eleven matches against bottom rated teams.

Reliability

Twenty nine matches played in the 2010-2011 Premier League season were included in the analysis. The video analysis system ProZone3® (ProZone Sports Ltd, 2002) was used to analyse the team's performances, postgame. Both Valter et al., (2006) and Bradley et al., (2007) found the data compiled by the Prozone3® system to be valid and reliable. The ProZone3® operational definitions have been used in this study for validation and reliability purposes (Hughes and Bartlett, 2002). The Prozone3® operational definitions were used to ensure the consistency of analysis when categorising the key performance indicators used in this study. The data was transferred into SPSS version 18 (SPSS Inc., 2010) where the final data set was compiled for analysis. Following data collection, performance profiles were constructed and analysed, in relation to the whole team, the individual positional units, individual players and opposition standards. Individual performance indicators were also normalised for 90 minutes; by dividing the observed counts (c) by the time in minutes and seconds played in each match (n), this was multiplied by 90 minutes ($c/n \times 90$) (Taylor et al., 2010).

Data analysis

Gaussian distribution of the parameters was tested by the Kolmogorov-Smirnov test and normality assumed (Lumley, 2002). A one-way ANOVA was used to compare the differences of performance indicators between different standards of opponent (Ducher, 2005). Tukey's post-hoc test was used to locate the significant differences found between groups. This test was selected because there are unequal group sizes (SPSS Inc., 2010). A 95% ($P<0.05$) significance level was set, to compromise between a type I and type II error occurring (Taylor et al., 2004). To facilitate interpretation of the results the occurrences of successful passes and headed passes were expressed as a percentage of the total successful/headed passes (Hughes and Bartlett, 2002).

RESULTS

Team Level

Analysis of team level performance profile against the different standards of opponent revealed a number of significant differences (Table 1). For example, standards of opponent had a significant effect on interceptions ($\rho=0.016$) with significantly more interceptions against middle ($\rho=0.011$, 11.2 ± 8.3) than top standard teams (8.4 ± 5.2). Standard of opponent had a significant effect on total passes ($\rho=0.013$) and pass success ($\rho=0.11$) with significantly more total passes against middle ($\rho=0.045$, 33.1 ± 14.6) than top (28.5 ± 12.9) and bottom standard ($\rho=0.020$, 28.4 ± 14.0) and significantly more successful passes against middle ($\rho=0.047$, 84.1%) than top (83.7%) and bottom standard teams ($\rho=0.015$, 83.2%). Headed passes ($\rho=0.007$) were also significantly less successful against middle ($\rho=0.047$, 44.6%) than top (47.4%) and bottom standard teams ($\rho=0.007$, 51.8%).

Table 1. Behavioural profiles for the team (average frequency/percentage per player), facing different standards of opponent (mean \pm sd).

Performance Indicators	Top	Middle	Bottom
Tackles (n)	2.8 \pm 2.2	2.5 \pm 2.0	2.8 \pm 2.5
Interceptions (n) *	8.4 \pm 5.2	11.2 \pm 8.3	10.0 \pm 6.7
Blocks (n)	1.7 \pm 2.0	1.5 \pm 1.9	1.7 \pm 1.6
Clearances (n)	1.8 \pm 2.1	2.1 \pm 2.8	1.8 \pm 2.6
Possession gained (n)	13.4 \pm 6.7	15.7 \pm 9.6	14.8 \pm 8.0
Possession lost (n)	18.1 \pm 7.5	20.2 \pm 7.9	19.4 \pm 6.7
Total pass (n) * +	28.5 \pm 12.9	33.1 \pm 14.6	28.4 \pm 14.0
Successful passes (%) * +	83.7	84.1	83.2
(no. of successful passes / total number of passes)	(2293.7/2739.5)	(3370.5/4007.8)	(3238.3/3892.9)
Successful headed pass (%) * ^	47.4	44.6	51.8
(no. of successful headed passes / total number of headed passes)	(167.8/354.2)	(329.8/740.4)	(389.9/753.4)
Ball received (n)	32.4 \pm 10.9	36.8 \pm 12.2	34.9 \pm 23.6
Free kicks (n)	1.1 \pm 1.4	0.8 \pm 1.4	0.9 \pm 1.6
Corners (n)	0.7 \pm 3.0	0.6 \pm 1.9	0.5 \pm 1.7
Shots on target (n)	0.7 \pm 1.6	0.9 \pm 1.8	1.0 \pm 1.5
Dribbling (n)	1.2 \pm 2.3	1.9 \pm 3.1	1.5 \pm 2.4
Crossing (n)	2.0 \pm 3.9	1.8 \pm 2.6	1.6 \pm 2.1
Final third entries (n)	4.5 \pm 3.8	5.9 \pm 4.4	5.4 \pm 5.2
Penalty area entries (n)	3.1 \pm 4.7	3.4 \pm 4.1	3.2 \pm 3.7
Tackled (n)	3.3 \pm 4.0	3.3 \pm 4.0	3.2 \pm 3.2

*Tukey's post hoc adjusted One-way ANOVA test revealed significant mean difference between top and middle standards of opponent ($P<0.05$). ^Tukey's post hoc adjusted One-way ANOVA test revealed significant mean difference between top and bottom standards of opponent ($P<0.05$). +Tukey's post hoc adjusted One-way ANOVA test revealed significant mean difference between middle and bottom standards of opponent ($P<0.05$).

Unit Level

Analysis of player unit level in relation to opposition standard revealed a number of significant results (Table 2). For centre-backs, standards of opponent had a significant effect on interceptions ($\rho=0.002$) with significantly more interceptions against middle ($\rho=0.001$, 19.7 ± 7.1) than top standard teams (13.1 ± 4.7). Standard of opponent also had a significant effect on possession gained ($\rho=0.011$) and lost ($\rho=0.031$) with significantly more possession gains against middle ($\rho=0.008$, 24.5 ± 7.9) than top standard (18.5 ± 5.4) and significantly more possession losses against bottom ($\rho=0.024$, 19.6 ± 6.5) than top standard teams (15.4 ± 4.3). A significant effect was also found for total passes ($\rho=0.008$) and successful passes ($\rho=0.012$); with significantly more total passes against middle ($\rho=0.008$, 32.7 ± 10.0) than top (23.5 ± 6.0) and bottom standard ($\rho=0.049$, 26.2 ± 11.0), and significantly more successful passes against middle ($\rho=0.016$, 83.6%) than top (83.3%) and bottom standard teams ($\rho=0.043$, 81.1%). Successful headed passes ($\rho=0.035$) were also significantly higher against bottom ($\rho=0.033$, 52.6%) than top standard teams (44.0%).

For full-backs, standards of opponent had a significant effect on interceptions ($\rho=0.004$) with significantly less interceptions against top ($\rho=0.003$, 9.9 ± 5.0) than middle (15.7 ± 7.0) and bottom standard teams ($\rho=0.046$, 13.9 ± 4.3). Significant effects were also found for possession gained ($\rho=0.019$) and possession lost ($\rho=0.046$). There was significantly more possession gains against middle ($\rho=0.014$, 21.8 ± 8.1) than top standard (16.0 ± 6.0) and significantly more possession losses against middle ($\rho=0.040$, 21.8 ± 5.8) than top standard (17.7 ± 5.0). Standards of opponent also had a significant effect on total passes ($\rho=0.008$) and successful passes ($\rho=0.016$); with significantly less total passes against bottom ($\rho=0.006$, 33.3 ± 13.0) than middle standard (44.5 ± 13.4), and significantly less successful passes against bottom ($\rho=0.012$, 80.8%) than middle standard (81.2%).

For centre midfielders, standards of opponent had a significant effect on successful headed passes ($\rho=0.044$) with significantly more successful headed passes against bottom ($\rho=0.036$, 65.2%) than top standard teams (47.7%). Standards of opponent had a significant effect on final third entries ($\rho=0.038$) with significantly more final third entries against bottom ($\rho=0.032$, 7.8 ± 4.2) than top standard teams (4.7 ± 3.2). For centre forwards, standards of opponent had a significant effect on clearances ($\rho=0.034$) with significantly less clearances against bottom ($\rho=0.030$, 0.0 ± 0.2) than top standard teams (0.4 ± 0.8). Standards of opponent also had a significant effect on successful passes ($\rho=0.049$) with significantly more successful passes against middle ($\rho=0.053$, 93.8%) than top standard teams (91.7%). However, no differences were observed for total passes ($\rho=0.918$). There were also no significant differences found for wide midfield players.

Table 2. Behavioural profile per positional units (average frequency/percentage per player), facing different standards of opponent (mean±sd).

Performance Indicators	Centre-Backs			Full-Backs			Centre Midfields			Wide Midfields			Centre Forwards		
	Top	Middle	Bottom	Top	Middle	Bottom	Top	Middle	Bottom	Top	Middle	Bottom	Top	Middle	Bottom
Tackles (n)	3.2±1.7	3.1±1.7	3.1±2.0	3.8±2.8	2.7±2.1	3.2±2.5	3.4±2.3	3.0±2.1	3.1±2.5	1.9±1.8	2.3±1.8	2.9±3.0	1.3±1.7	1.1±1.3	1.3±1.7
Interceptions (n)	13.1±4.7 *	19.7±7.1	16.7±5.0	9.9±5.0 ⁺	15.7±7.0	13.9±4.3	8.3±4.2	10.3±6.4	8.8±5.6	6.6±3.7	6.6±5.6	6.3±3.9	3.1±2.4	2.8±2.6	2.9±3.5
Blocks (n)	1.9±1.5	1.2±1.3	1.5±1.4	1.5±1.4	2.6±2.4	2.2±1.7	2.2±1.9	1.4±1.5	2.1±2.1	1.8±3.0	1.1±1.5	1.5±1.4	1.1±1.2	1.1±2.2	0.9±1.2
Clearances (n)	3.1±1.6	3.5±2.3	4.4±3.5	2.7±2.5	3.8±3.6	2.7±2.5	1.7±2.4	1.5±1.5	0.8±0.9	0.7±1.3	1.1±2.7	0.8±1.4	0.4±0.8 *	0.1±0.3	0.0±0.2
Possession gained (n)	18.5±5.4 *	24.5±7.9	21.7±5.5	16.0±6.0 *	21.8±8.1	19.5±5.8	14.4±6.3	15.2±8.1	14.4±6.6	10.7±4.5	10.3±6.0	11.3±5.4	6.1±4.4	5.3±2.3	5.5±4.4
Possession lost (n)	15.4±4.3 *	18.1±4.5	19.6±6.5	17.7±5.0 *	21.8±5.8	19.4±5.6	16.3±5.0	19.6±6.6	17.3±7.3	23.7±10.3	23.7±10.9	21.1±7.6	15.1±6.2	15.2±6.7	19.0±6.4
Total pass (n)	23.5±6.0 *	32.7±10.0 +	26.2±11.0	36.7±11.8	44.5±13.4 +	33.3±13.0	37.2±13.0	41.9±12.0	39.9±14.0	25.3±13.0	23.8±11.1	24.9±13.3	18.3±7.1	19.4±7.5	18.5±8.7
Successful passes (%)	83.3 *	83.6 +	81.1	82.3	80.8 +	81.2	87.4	84.1	86.1	78.1	85.4	83.2	91.7 *	93.8	84.7
(no. of successful passes / total number of passes)	(390.8/469.1)	(601.4/719.4)	(637.9/786.6)	(574.6/ 698.2)	(934.1/1156.0)	(757.1/932.6)	(618.2/707.6)	(917.1/1089.8)	(82.4/958.2)	(474.8/608.0)	(608.9/713.1)	(641.9/771.7)	(235.3/256.7)	(308.9/329.4)	(375.9/443.8)
Successful headed pass (%)	44.0 *	46.2	52.6	68.6	50.3	53.2	47.7*	43.6	65.2	37.5	37.2	45.5	39.7	41	37.8
(no. of successful headed passes / total number of headed passes)	(66.1/150.1)	(125.6/271.5)	(168.0/319.5)	(45.2/65.9)	(84.3/167.4)	(87.1/163.7)	(17.2/36.2)	(40.8/90.7)	(57.8/88.7)	(22.1/58.9)	(59.1/158.6)	(50.2/110.4)	(17.2/43.2)	(20.1/49.1)	(26.9/71.2)
Ball received (n)	23.3±7.9	29.8±10.4	28.3±8.9	34.4±8.4	40.1±14.6	40.9±43.7	38.7±9.6	43.5±9.2	42.2±12.1	36.3±10.9	36.8±10.7	33.7±12.0	27.5±9.8	30.4±10.0	30.4±9.7
Free kicks (n)	1.4±1.3	1.2±1.2	1.3±1.9	1.5±1.4	0.7±1.1	0.9±1.0	0.7±0.9	0.6±1.3	0.6±1.2	1.3±1.8	1.0±1.9	1.4±2.4	0.2±0.7	0.2±1.0	0.0±0.2
Corners (n)	0.0±0.0	0.0±0.0	0.0±0.0	0.1±0.5	0.0±0.0	0.0±0.2	0.5±1.0	0.5±1.3	0.6±1.5	2.3±5.6	1.3±2.8	1.5±2.9	0.0±0.0	1.0±2.9	0.3±1.1
Shots on target (n)	0.4±0.5	0.4±0.7	0.5±0.6	0.4±1.0	0.2±0.5	0.0±0.2	1.1±2.4	0.5±1.2	1.2±1.3	0.9±2.0	1.6±2.3	1.5±1.4	0.7±1.0	1.9±2.6	2.0±2.3
Dribbling (n)	0.2±0.5	0.1±0.4	0.2±0.5	0.4±0.6	0.5±1.0	0.6±0.9	1.1±2.4	1.1±1.5	2.3±2.0	2.2±3.0	4.6±4.6	2.9±3.6	2.0±2.8	2.8±2.7	1.8±1.9
Crossing (n)	0.3±0.6	0.2±0.6	0.5±1.1	1.6±1.5	1.2±1.5	1.3±1.5	0.7±1.0	1.3±1.7	1.2±1.2	4.9±6.7	4.4±3.6	3.1±3.2	1.5±1.5	1.1±1.2	1.6±1.9
Final third entries (n)	3.2±2.4	5.3±2.7	5.7±8.0	6.5±4.0	7.8±4.5	6.2±3.9	4.7±3.2 *	6.9±4.0	7.8±4.2	4.8±4.9	5.9±5.3	5.5±4.0	2.9±2.0	2.7±2.7	1.8±1.9
Penalty area entries (n)	0.7±1.0	0.6±0.7	1.2±2.0	2.9±2.3	2.7±3.0	3.1±2.5	1.9±2.2	2.9±3.6	3.1±3.4	6.9±7.8	7.1±4.9	5.8±5.3	1.8±1.4	2.5±3.5	2.5±2.1
Tackled (n)	0.7±1.4	0.9±1.7	1.2±2.0	1.5±1.7	1.3±1.3	1.3±1.7	3.9±2.6	5.1±3.6	3.9±2.4	5.6±5.6	5.2±5.6	5.0±3.4	4.6±4.1	3.7±3.3	4.7±3.6

*Tukey's post hoc adjusted One-way ANOVA test revealed significant mean difference between top and middle standards of opponent ($P<0.05$). ^Tukey's post hoc adjusted One-way ANOVA test revealed significant mean difference between top and bottom standards of opponent ($P<0.05$). +Tukey's post hoc adjusted One-way ANOVA test revealed significant mean difference between middle and bottom standards of opponent ($P<0.05$).

Player Level

In order to report differences between players, individual players were categorised by their playing position and a unique playing number. For example the four fullbacks were reported as FB1, FB2, FB3 and FB4 in the results. The analysis of performance profiles at player level revealed a number of significant results (see Tables 3-7). Interceptions were found to have a significant effect for CM2 ($\rho=0.008$), CM3 ($\rho=0.013$), CB2 ($\rho=0.030$) and FB3 ($\rho=0.042$). Specifically CM2 conducted more interceptions against middle ($\rho=0.006$, 17.7 ± 3.6) than top (9.9 ± 4.1) standard teams, however CM3 conducted more against top ($\rho=0.029$, 9.2 ± 2.5) than middle (5.9 ± 5.3) or bottom ($\rho=0.016$, 5.4 ± 2.0) standard teams. CB2 also conducted more interceptions against middle ($\rho=0.026$, 24.1 ± 10.8) than top teams (10.8 ± 4.9). Although a significant effect was found for FB3's interceptions ($\rho=0.042$) no post-hoc differences were found.

A number of effects were found for possession. Possession gained was found to have a significant effect for FB2 ($\rho=0.049$), CM2 ($\rho=0.048$) and CF1 ($\rho=0.026$). Specifically FB2 had significantly more possession gains against middle ($\rho=0.045$, 26.2 ± 12.6) than top (12.6 ± 3.2) teams, this was also the same for CM2 (middle $\rho=0.038$, 24.6 ± 5.2 ; top, 18.6 ± 4.6), and CF1 had significantly fewer possession gains against middle ($\rho=0.031$, 4.1 ± 1.8) than top (8.1 ± 4.3). CM3 however, had significantly fewer possession gains against bottom ($\rho=0.029$, 10.1 ± 2.2) than top standard teams (14.7 ± 2.3). Possession lost was found to have a significant effect for CB4 ($\rho=0.035$) only, with more losses of possession against middle ($\rho=0.044$, 20.0 ± 3.5) than top (14.5 ± 3.5) standard teams. A significant effect was found for both FB3 ($\rho=0.033$) and CM2 ($\rho=0.002$) in relation to free kicks, with FB3 taking significantly less free kicks against middle

($\rho=0.026$, 0.4 ± 0.6) than top (2.5 ± 0.2) teams. Whereas CM2 had significantly more free kicks against top ($\rho=0.019$, 1.0 ± 0.8) than middle (0.3 ± 0.5) and bottom ($\rho=0.001$, 0.0 ± 0.0) teams.

Tackles were found to have a significant effect for both CB4 ($\rho=0.048$) and CM3 ($\rho=0.039$). CB4 conducted significantly more tackles against bottom teams ($\rho=0.043$, 4.7 ± 1.6) than top (2.6 ± 2.0) teams, whereas CM3 conducted fewer tackles against bottom ($\rho=0.031$, 1.8 ± 0.9) than middle (3.2 ± 1.2) teams. For CM2 standard of opposition had a significant effect on final third entries ($\rho=0.022$) and penalty area entries ($\rho=0.023$); with significantly more penalty area entries against bottom ($\rho=0.032$, 2.0 ± 1.5) than top standard teams (0.3 ± 0.5), and significantly more final third entries against bottom ($\rho=0.018$, 9.1 ± 4.5) than top standard teams (4.5 ± 1.7). There were also significant effects on penalty area entries ($\rho=0.012$) for WM1 with more entries against top ($\rho=0.011$, 19.3 ± 15.6) than bottom standard teams (0.8 ± 1.9). Significant effects were also found for final third entries for CF1 ($\rho=0.032$) with significantly more final third entries against top ($\rho=0.030$, 4.1 ± 1.9) than bottom standard teams (1.4 ± 1.2).

Less frequent effects were found for crossing (WM1, $\rho=0.003$) with significantly more crosses against top ($\rho=0.009$, 20.1 ± 7.1) than middle (5.8 ± 3.6) and bottom ($\rho=0.002$, 3.0 ± 5.6); dribbling (WM3, $\rho=0.027$) with significant more dribbles against middle teams ($\rho=0.041$, 9.0 ± 5.6) than top teams (2.3 ± 4.0) and blocks (WM4, $\rho=0.041$) although no post hoc differences were found. Total passes were found to have a significant effect for FB4 ($\rho=0.015$) with less passes against bottom ($\rho=0.006$, 35.1 ± 11.1) than middle standard teams (51.4 ± 10.1), a significance was also found for balls received ($\rho=0.022$) where FB4 received less balls against bottom teams ($\rho=0.019$, 31.5 ± 9.6) than middle teams (43.9 ± 8.5). Finally CF3 cleared significantly less balls against bottom ($\rho=0.049$, 0.0 ± 0.0) than top (0.5 ± 0.7) with a significant effect of $\rho=0.047$.

Table 3. Behavioural profile per centre-back (CB) player (average frequency/percentage per player), facing different standards of opponent.

Performance Indicators	CB1			CB2			CB3			CB4		
	Top	Middle	Bottom	Top	Middle	Bottom	Top	Middle	Bottom	Top	Middle	Bottom
Tackles (n)	3.6±1.6	4.3± 0.4	2.0± 2.0	3.4±0.9	2.5±1.3	2.3±1.5	3.6±2.1	2.6±2.0	2.1±1.6	2.6±2.0 [^]	3.5±1.7	4.7±1.6
Interceptions (n)	16.7±2.2	15.8± 5.9	13.5± 4.5	10.8±4.9*	24.1±10.8	18.7±3.4	13.6±5.9	18.8±4.4	16.5±3.8	12.3±4.0	19.4±7.9	16.6±6.7
Blocks (n)	1.9±0.6	1.0±1.4	1.0±1.0	1.8±1.3	1.3±1.9	1.0±1.1	2.8±1.8	2.0±1.3	1.8±1.9	1.2±1.7	0.5±0.5	1.8±1.2
Clearances (n)	4.0±1.1	1.7± 0.9	8.7±7.2	3.0±1.2	3.9±1.9	4.5±1.6	4.2±1.5	4.0±1.9	5.1±3.3	1.5±1.4	3.4±3.0	2.4±1.8
Possession gained (n)	22.1±1.3	21.1±6.9	16.5±6.9	16.4±4.6	28.4±13.9	22.7±4.6	20.2±7.1	23.9±5.2	20.4±4.4	16.3±5.3	24.0±7.6	23.6±6.1
Possession lost (n)	16.8±1.7	10.6±1.9	25.2±15	12.6±3.2	19.2±6.6	17.3±1.9	18.2±6.1	17.3±2.9	19.3±6.8	14.5±3.5*	20.0±3.5	19.7±4.8
Total pass (n)	18.6±4.9	13.1±5.5	21.3±11.0	21.0±5.8	34.6±13.3	22.2±8.4	25.6±8.4	35.6±8.7	26.8±14.3	26.9±4.1	33.7±4.6	29.4±8.9
Successful passes (%)	78.6	92.4	60.9	80	83.4	76.7	80.5	83.9	85.2	89.9	82.6	83.5
(no. of successful passes / total number of passes)	(58.5/74.4)	(24.3/26.3)	(39.0/64.0)	(84.0/105.0)	(115.6/138.6)	(102.0/133.0)	(103.0/128.0)	(239.0/285.0)	(226.7/266.1)	(145.3/161.7)	(222.6/269.6)	(270.2/323.5)
Successful headed pass (%)	26.3	30	46.1	57.6	50.4	57.1	47.1	46.6	52.9	46.9	49.2	51.8
(no. of successful headed passes / total number of headed passes)	(10.0/38.0)	(10.9/36.4)	(19.6/42.5)	(19.0/33.0)	(33.4/66.2)	(44.0/77.0)	(16.0/34.0)	(34.0/73.0)	(42.1/79.7)	(21.1/45.0)	(47.3/96.0)	(62.3/120.3)
Ball received (n)	16.1±4.9	9.1±0.2	45.8±56.0	21.0±4.4	31.9±16.5	20.7±8.0	26.0±10.9	31.0±6.5	26.3±13.7	27.9±5.9	32.7±5.7	29.6±8.6
Free kicks (n)	1.3±0.9	0.0±0.0	3.2±4.6	0.8±0.8	1.0±1.2	1.0±1.1	2.8±1.3	1.5±1.4	1.2±1.7	0.7±1.2	1.3±1.0	1.1±1.2
Comers (n)	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0	0.0± 0.0	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0	0.0± 0.0
Shots on target (n)	0.3±0.5	0.0±0.0	0.3±0.6	0.4±0.6	0.6±0.8	0.8±0.8	0.4±0.6	0.1±0.4	0.3±0.5	0.6±0.7	0.6±0.9	0.5±0.6
Dribbling (n)	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0	0.2±0.4	0.4±0.6	0.3±0.5	0.3±0.7	0.3±0.8	0.1±0.0	0.3±0.5
Crossing (n)	0.0± 0.0	0.0± 0.0	0.0±0.0	0.2±0.5	0.0±0.0	0.0±0.0	0.6±0.9	0.1±0.4	0.9±1.6	0.2±0.4	0.4±0.9	0.6±0.7
Final third entries (n)	2.1±2.1	1.5±2.1	15.5±23.4	2.6±1.9	6.4±3.2	4.8±2.6	4.4±3.9	6.3±1.7	5.3±5.9	3.4±1.3	4.6±2.7	3.8±2.3
Penalty area entries (n)	0.0± 0.0	0.0± 0.0	0.0±0.0	1.0±1.0	0.6±0.8	0.8±0.8	1.2±1.3	0.6±0.7	1.9±3.2	0.5±0.8	0.8±0.8	1.0±0.8
Tackled (n)	0.0±0.0	0.0± 0.0	0.0±0.0	0.2±0.5	0.3±0.5	0.3±0.5	0.6±0.9	0.5±1.1	0.6±1.0	1.7±2.2	1.9±2.4	2.6±2.7

*Tukey's post hoc adjusted One-way ANOVA test revealed significant mean difference between top and middle standards of opponent ($P<0.05$). [^]Tukey's post hoc adjusted One-way ANOVA test revealed significant mean difference between top and bottom standards of opponent ($P<0.05$). +Tukey's post hoc adjusted One-way ANOVA test revealed significant mean difference between middle and bottom standards of opponent ($P<0.05$).

Table 4. Behavioural profile per full-back (FB) player (average frequency/percentage per player), facing different standards of opponent (mean±sd).

Performance Indicators	FB1			FB2			FB3			FB4		
	Top	Middle	Bottom	Top	Middle	Bottom	Top	Middle	Bottom	Top	Middle	Bottom
Tackles (n)	5.1±2.1	2.1±2.3	4.0±1.6	1.9±1.7	3.3±3.2	3.8±2.7	2.5±1.5	1.6±1.5	2.4±2.5	5.7±3.4	3.5±1.4	3.1±2.9
Interceptions (n)	8.6±3.9	12.8±5.1	15.3±5.9	9.1±6.4	20.1±12.2	13.4±3.4	7.8±3.5	13.1±2.5	12.8±4.4	13.1±5.4	16.9±5.3	14.7±4.7
Blocks (n)	2.0±1.7	3.0±2.9	2.5±1.0	0.3±0.5	2.8±4.1	1.6±1.5	2.0±1.1	1.0±1.2	2.0±1.8	1.5±1.6	3.1±1.1	2.7±2.2
Clearances (n)	4.1±2.8	3.7±3.6	3.5±1.9	3.9±3.0	4.6±6.0	1.5±1.5	1.8±2.6	4.1±3.9	2.3±1.9	2.2±1.8	3.2±2.3	3.7±3.4
Possession gained (n)	15.7±3.0	19.2±6.7	22.3±4.4	12.6±3.2*	26.2±12.6	18.8±3.5	13.2±4.5	17.0±6.1	17.5±5.6	21.2±7.0	24.1±5.8	20.6±7.7
Possession lost (n)	17.0±1.7	20.2±4.3	21.0±4.2	16.0±7.6	23.3±7.5	18.6±5.9	18.3±3.2	20.0±6.8	19.7±7.3	18.4±6.3	23.2±5.7	19.2±4.9
Total pass (n)	31.4±7.5	37.6±7.9	32.5±8.4	24.9±9.8	43.1±22.5	28.7±8.0	42.2±9.9	43.0±10.9	35.8±19.9	41.9±11.4	51.4±10.1+	35.1±11.1
Successful passes (%)	80.6	82.6	77.7	87.2	90.3	85.9	81.4	80.5	80.1	81.9	75.4	80.6
(no. of successful passes / total number of passes)	(75.9/94.1)	(217.6/263.3)	(101.0/130.0)	(87.0/99.8)	(194.5/215.5)	(172.6/200.9)	(206.0/253.0)	(173.0/215.0)	(229.0/286.0)	(205.7/251.2)	(349.1/463.0)	(254.5/315.7)
Successful headed pass (%)	69	59.4	62.5	67.2	48.8	59.3	64	17.3	39.3	76.5	63.9	56.9
(no. of successful headed passes / total number of headed passes)	(4.5/6.5)	(19.0/32.0)	(15.0/24.0)	(11.7/17.5)	(38.8/79.6)	(27.6/46.5)	(16.0/25.0)	(3.4/19.8)	(19.0/48.4)	(13.0/17.0)	(23.0/36.0)	(25.5/44.8)
Ball received (n)	34.8±8.6	35.8±6.6	29.7±5.0	30.4±8.9	45.4±24.4	26.7±8.7	35.7±9.7	33.7±19.1	69.6±76.5	3.5±8.2	43.9±8.5+	31.5±9.6
Free kicks (n)	1.0±1.0	1.5±1.1	0.8±1.0	1.4±1.7	0.8±1.8	1.1±0.8	2.5±0.2*	0.4±0.6	1.5±1.2	0.7±0.8	0.1±0.3	0.3±0.7
Corners (n)	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0	0.3±0.8	0.0±0.0	0.1±0.4	0.0±0.0	0.0±0.0	0.0±0.0
Shots on target (n)	0.0±0.0	0.4±0.8	0.0±0.0	1.0±2.1	0.2±0.5	0.0±0.0	0.3±0.5	0.0±0.0	0.0±0.0	0.3±0.5	0.1±0.3	0.1±0.3
Dribbling (n)	0.5±0.8	0.4±0.8	1.0±1.5	0.0±0.0	0.9±1.9	0.3±0.5	0.7±0.5	0.5±0.7	0.8±0.9	0.5±0.8	0.3±0.5	0.5±1.1
Crossing (n)	1.8±0.3	2.0±1.3	1.3±0.5	2.3±2.7	0.8±1.8	0.4±0.6	2.0±1.3	1.8±2.2	2.3±1.8	0.7±0.5	0.6±0.5	1.3±1.2
Final third entries (n)	5.9±2.0	6.6±5.0	8.0±3.7	6.7±3.5	9.4±5.5	4.9±4.5	6.8±2.9	5.5±4.2	7.4±5.2	6.2±6.2	9.0±3.9	5.4±1.6
Penalty area entries (n)	2.3±3.1	2.3±1.7	2.0±1.4	2.7±3.3	4.6±6.4	2.4±2.7	4.0±2.1	2.1±1.9	3.8±2.8	2.3±1.1	2.5±1.0	3.5±2.6
Tackled (n)	0.3±0.6	1.3±1.0	2.3±1.7	2.2±2.0	0.9±1.9	1.4±2.9	1.0±1.9	1.2±1.3	0.6±0.5	2.2±2.1	1.7±1.3	1.4±1.2

*Tukey's post hoc adjusted One-way ANOVA test revealed significant mean difference between top and middle standards of opponent (P<0.05). ^ Tukey's post hoc adjusted One-way ANOVA test revealed significant mean difference between top and bottom standards of opponent (P<0.05). + Tukey's post hoc adjusted One-way ANOVA test revealed significant mean difference between middle and bottom standards of opponent (P<0.05).

Table 5. Behavioural profile per centre midfield (CM) player (average frequency/percentage per player), facing different standards of opponent (mean±sd).

Performance Indicators	CM1			CM2			CM3		
	Top	Middle	Bottom	Top	Middle	Bottom	Top	Middle	Bottom
Tackles (n)	2.0±2.2	1.5±1.6	2.6±2.0	5.5±2.2	4.6±2.3	4.6±3.0	2.4±1.0	3.2±1.2 +	1.8±0.9
Interceptions (n)	4.4±4.1	8.0±5.4	5.9±3.1	9.9±4.1 *	17.7±3.6	14.1 ± 5.4	9.2±2.5 **^	5.9±2.3	5.4±2.0
Blocks (n)	0.9±1.0	0.8±0.7	0.6±0.9	3.3±2.0	1.9±1.8	2.7±2.3	1.9±1.5	1.6±1.6	2.7±2.1
Clearances (n)	2.4±4.3	1.0±1.1	0.7±0.7	1.4±1.8	2.2±1.9	1.2±1.2	1.6±0.9	1.2±1.4	0.6±0.8
Possession gained (n)	7.3±6.4	10.4±6.1	9.8±3.5	18.6±4.6 *	24.6±5.2	21.7±3.9	14.7±2.3 ^	11.3±4.1	10.1±2.2
Possession lost (n)	15.7±3.5	17.4±6.2	16.3±6.1	15.0±4.7	20.6±7.1	17.5±9.1	18.6±6.3	20.8±6.7	18.0±6.8
Total pass (n)	25.8±19.1	42.6±12.3	34.7±10.1	44.0±7.7	51.7±7.3	50.1±15.0	37.8±5.0	32.6±6.5	33.1±10.9
Successful passes (%)	88.3	82.5	86.6	87.7	88.8	86.6	86.3	79.8	84.9
(no. of successful passes / total number of passes)	(113.9/129.0)	(316.1/383.2)	(210.3/242.9)	(308.6/351.9)	(366.9/413.2)	(390.3/450.5)	(195.7/226.7)	(234.1/293.5)	(224.9/264.8)
Successful headed pass (%)	46.5	54.3	54.3	52.9	44.1	69.2	40.5	33.3	64.7
(no. of successful headed passes / total number of headed passes)	(2.2/4.7)	(12.7/23.4)	(7.5/13.8)	(10.0/18.9)	(18.8/42.6)	(28.1/40.6)	(5.1/12.6)	(9.4/28.2)	(22.2/34.4)
Ball received (n)	33.3±14.6	44.2±11.4	39.0±12.7	41.4±8.4	48.3±5.7	46.2±13.1	39.5±4.7	38.1±6.9	40.4±10.7
Free kicks (n)	0.5±1.2	1.4±1.9	1.4±1.8	1.0±0.8 **^	0.3±0.5	0.0±0.0	0.5±0.8	0.3±0.6	0.5±0.9
Corners (n)	1.0±1.6	0.6±1.3	2.0±2.3	0.0±0.0	0.0±0.0	0.0±0.0	0.7±1.1	0.9±1.8	0.2±0.5
Shots on target (n)	2.8±4.4	0.9±1.6	1.8±1.5	0.4±0.7	0.1±0.4	0.5±0.6	0.7±1.0	0.6±1.2	1.5±1.4
Dribbling (n)	2.3±2.3	1.7±1.9	2.6±1.9	0.3±0.7	0.6±0.8	1.6±1.9	1.2±1.2	1.1±1.2	2.8±2.1
Crossing (n)	0.5±0.7	2.1±2.3	1.7±1.2	0.0±0.0	0.9±0.4	1.1±1.0	1.7±1.2	0.8±0.7	0.9±1.3
Final third entries (n)	3.7±4.6	7.8±4.9	7.6±5.3	4.5±1.7 ^	5.0±3.4	9.1±4.5	5.8±3.8	7.5±3.3	6.5±2.3
Penalty area entries (n)	1.9±1.9	4.2±5.6	5.2±5.6	0.3±0.5 ^	1.3±1.3	2.0±1.5	4.2±1.8	3.2±1.7	2.6±1.4
Tackled (n)	4.6±3.8	2.9±2.3	2.6±1.3	3.8±2.7	6.0±3.4	4.0±2.5	3.4±1.5	6.3±4.1	4.8±2.8

*Tukey's post hoc adjusted One-way ANOVA test revealed significant mean difference between top and middle standards of opponent (P<0.05). ^ Tukey's post hoc adjusted One-way ANOVA test revealed significant mean difference between top and

bottom standards of opponent ($P<0.05$). +Tukey's post hoc adjusted One-way ANOVA test revealed significant mean difference between middle and bottom standards of opponent ($P<0.05$).

Table 6. Behavioural profile per wide midfield (WM) player (average frequency/percentage per player), facing different standards of opponent (mean±sd).

Performance Indicators	WM1			WM2			WM3			WM4		
	Top	Middle	Bottom	Top	Middle	Bottom	Top	Middle	Bottom	Top	Middle	Bottom
Tackles (n)	0.0±0.0	1.0±1.6	2.9±5.9	2.3±1.2	3.2±1.8	2.9±1.6	0.7±1.6	1.4±1.9	2.0±3.4	3.2±1.6	2.9±1.4	3.4±1.8
Interceptions (n)	5.1±5.1	3.9±3.8	5.9±4.9	4.2±1.5	4.3±1.9	4.7±2.5	8.1±4.9	8.9±8.9	3.0±2.3	8.1±2.8	8.1±4.2	9.7±2.7
Blocks (n)	1.8±3.1	0.3±0.6	0.6±1.5	3.1±4.9	1.3±1.7	1.3±1.2	1.2±1.9	1.1±1.2	0.6±1.2	1.0±1.1	1.2±1.9	2.6±1.1
Clearances (n)	1.7±2.9	0.4±0.8	0.8±1.9	0.1±0.4	0.4±1.2	0.1±0.3	0.0±0.0	2.2±4.9	0.0±0.0	1.3±1.3	1.2±0.8	1.8±1.7
Possession gained (n)	6.9±6.0	5.7±5.5	10.1±4.2	9.9±3.9	9.3±3.5	9.2±3.6	10.0±4.1	11.5±8.9	5.7±4.9	13.4±4.0	12.8±3.4	16.7±3.7
Possession lost (n)	33.9±7.3	15.5±6.9	19.2±12.4	20.1±4.9	19.5±7.9	19.1±5.5	22.6±17.4	32.3±13.4	21.1±21.1	25.4±5.6	24.1±7.8	24.5±5.8
Total pass (n)	15.4±13.2	11.0±5.5	12.4±12.6	25.8±6.2	25.0±4.9	26.2±6.5	16.3±12.0	18.1±9.2	12.2±8.8	35.5±11.9	34.8±7.8	36.0±10.7
Successful passes (%)	71.9	100	78.3	80	87.3	85.5	72.2	85.9	77.9	80	81.3	83.1
(no. of successful passes / total number of passes)	(33.1/46.1)	(54.9/54.9)	(58.4/74.6)	(144.2/180.3)	(174.9/200.3)	(246.6/288.4)	(70.5/97.7)	(124.5/144.9)	(37.9/48.8)	(227.0/283.9)	(254.6/313.0)	(299.0/360.0)
Successful headed pass (%)		13.4	46.5	47.4	56.3	39.4	100	45.9	0	29.5	45.1	41.6
(no. of successful headed passes / total number of headed passes)	0	(6.3/47.0)	(16.1/34.7)	(3.6/7.6)	(10.5/18.7)	(6.1/15.4)	(4.9/4.9)	(17.2/37.6)	(0/3)	(13.7/46.4)	(25.0/55.4)	(28.0/67.3)
Ball received (n)	42.3±13.8	26.2±10.3	25.7±16.9	35.3±5.5	37.5±7.9	35.6±8.0	27.9±10.1	39.9±13.0	27.6±13.1	41.4±11.4	40.3±7.9	38.9±9.9
Free kicks (n)	1.7±2.9	0.0±0.0	0.0±0.0	0.7±1.3	0.4±0.7	0.1±0.3	0.0±0.0	0.0±0.0	0.0±0.0	2.7±1.8	2.9±2.6	4.1±2.5
Comers (n)	8.9±15.4	0.0±0.0	0.0±0.0	0.0±0.0	0.1±0.4	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0	3.5±2.5	4.2±3.9	4.6±3.5
Shots on target (n)	0.0±0.0	0.5±1.2	1.8±2.0	0.6±0.6	0.5±0.9	1.3±1.1	0.2±0.6	2.8±2.6	0.6±1.2	0.9±0.7	1.4±1.8	1.4±0.8
Dribbling (n)	3.4±5.8	2.3±2.3	2.8±4.4	3.1±2.3	5.1±3.6	5.2±4.1	2.3±4.0 *	9.0±5.6	2.5±1.9	1.0±0.9	1.4±1.9	0.6±0.9
Crossing (n)	20.1±7.1**	5.8±3.6	3.0±5.6	3.6±2.9	4.1±2.9	3.4±2.5	1.9±3.9	6.0±4.6	4.8±3.3	2.7±1.4	2.3±2.4	2.1±1.9
Final third entries (n)	5.2±5.2	5.8±8.3	5.9±4.9	2.2±1.8	2.3±1.6	3.8±2.2	1.3±2.1	5.6±5.3	1.7±2.3	9.7±4.6	9.3±4.1	8.7±3.2
Penalty area entries (n)	19.3±15.6*	5.8±3.6	0.8±1.9	4.4±2.9	4.7±3.3	4.2±2.5	2.7±6.0	6.7±5.4	3.7±4.4	7.7±3.1	10.2±5.2	11.4±4.8
Tackled (n)	9.6±9.9	3.7±4.5	5.5±5.7	7.1±3.5	5.7±3.9	6.6±2.3	7.2±6.9	9.0±8.4	6.4±2.5	1.6±1.7	2.1±1.2	2.4±1.4

*Tukey's post hoc adjusted One-way ANOVA test revealed significant mean difference between top and middle standards of opponent ($P<0.05$). ^Tukey's post hoc adjusted One-way ANOVA test revealed significant mean difference between top and bottom standards of opponent ($P<0.05$). +Tukey's post hoc adjusted One-way ANOVA test revealed significant mean difference between middle and bottom standards of opponent ($P<0.05$).

Table 7. Behavioural profile per centre forward (CF) player (average frequency/percentage per player), facing different standards of opponent (mean±sd).

Performance Indicators	CF1			CF2			CF3		
	Top	Middle	Bottom	Top	Middle	Bottom	Top	Middle	Bottom
Tackles (n)	1.7±2.3	0.7±0.7	1.3±0.9	1.1±1.3	1.3±1.2	1.2±1.8	1.0±1.4	1.5±2.1	1.6±2.7
Interceptions (n)	4.3±2.4	2.6±1.9	2.0±1.5	2.6±2.1	3.3±1.2	1.9±2.3	1.0±1.4	2.6±4.5	5.8±5.6
Blocks (n)	1.6±1.4	0.5±0.8	1.0±1.0	0.5±0.6	0.7±0.8	0.5±1.1	0.9±1.4	2.3±3.9	1.3±1.7
Clearances (n)	0.7±1.0	0.1±0.4	0.1±0.3	0.2±0.5	0.3±0.5	0.0±0.0	0.5±0.7 ^	0.0±0.0	0.0±0.0
Possession gained (n)	8.1±4.3 *	4.1±1.8	4.6±2.1	4.9±4.1	5.4±0.6	3.7±3.9	3.5±4.9	7.2±2.9	9.3±6.0
Possession lost (n)	18.9±4.7	19.5±4.6	19.6±3.4	12.1±6.7	13.8±4.5	19.2±9.8	12.5±2.1	9.2±6.7	17.6±5.4
Total pass (n)	20.9±4.0	22.4±5.9	21.1±5.8	15.2±8.2	10.5±2.0	11.8±10.1	20.0±11.4	21.7±7.5	22.9±5.9
Successful passes (%)	93.6	95.6	91.6	90.3	81.1	85.4	88.5	95.7	73.7
(no. of successful passes / total number of passes)	(117.4/125.4)	(171.2/179.1)	(193.5/230.6)	(82.4/91.2)	(34.1/42.0)	(80.9/94.7)	(35.5/40.1)	(103.6/108.3)	(101.5/137.7)
Successful headed pass (%)	48.8	36.8	33.6	27.1	49.1	27.5	100		77.5
(no. of successful headed passes / total number of headed passes)	(10.5/21.6)	(12.0/32.6)	(8.0/23.9)	(5.6/20.7)	(8.1/16.5)	(9.8/35.6)	(1.0/1.0)	0	(9.1/11.7)
Ball received (n)	33.0±5.9	37.9±8.1	35.2±5.4	21.8±11.5	23.9±3.6	27.2±12.7	27.8±5.4	23.6±7.7	26.7±8.9
Free kicks (n)	0.4±1.0	0.5±1.4	0.1±0.3	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0
Comers (n)	0.0±0.0	0.9±2.5	0.2±0.4	0.0±0.0	0.0±0.0	0.0±0.0	0.0±0.0	2.1±4.7	0.9±2.1
Shots on target (n)	1.0±1.3	1.5±1.7	2.3±2.0	0.5±0.9	1.0±0.7	1.1±2.1	1.0±0.0	3.4±4.3	2.7±3.1
Dribbling (n)	3.7±3.5	3.3±1.9	3.1±1.9	0.4±0.6	1.7±0.8	0.6±1.2	1.8±2.5	2.9±4.5	1.1±1.7
Crossing (n)	2.5±1.7	1.5±1.1	2.4±1.9	0.7±0.6	1.1±1.4	0.9±1.8	1.0±1.4	0.5±1.0	1.2±1.8
Final third entries (n)	4.1±1.9 ^	3.1±2.5	1.4±1.2	1.9±1.5	1.1±1.4	1.2±1.4	2.3±1.8	3.5±3.8	3.2±3.0
Penalty area entries (n)	2.3±1.4	3.1±3.7	3.2±1.7	1.2±1.1	1.3±1.2	1.5±2.3	2.0±2.8	2.5±4.5	2.6±2.4
Tackled (n)	5.1±2.9	4.6±3.9	5.3±1.9	5.1±5.6	5.1±1.6	5.9±5.0	1.5±2.1	1.2±1.7	2.2±2.9

*Tukey's post hoc adjusted One-way ANOVA test revealed significant mean difference between top and middle standards of opponent ($P<0.05$). ^Tukey's post hoc adjusted One-way ANOVA test revealed significant mean difference between top and

bottom standards of opponent ($P < 0.05$). + Tukey's post hoc adjusted One-way ANOVA test revealed significant mean difference between middle and bottom standards of opponent ($P < 0.05$).

DISCUSSION AND CONCLUSIONS

In recent years there have been a number of papers investigating positional demands and situational variables in soccer (Williams et al., 2003; Taylor et al., 2004, 2005). Those which have considered opposition standard as a variable however, have generally not accounted for individual players or even units. Those studies which have found team effects, in relation to opposition standard, have generally attributed those effects to either tactical aspects of performance, such as possession (Jones et al., 2004) or outcomes such as match status (Lago, 2009). The current study aimed to develop an understanding of individual players' match performances in relation to different standards of opponents in the English Premier League. This discussion attempts to explain how analysis of observed players' performance can help identify the differences and patterns at both team and individual level, and how invariance found in player performance may be used to aid the development of both training strategies and game tactics in relation to different standards of opposition.

The current study found at team level, as well as for centre-backs, the total number of passes and percentage of successful passes was significantly higher against middle compared with top standard opponents. If teams are similarly ranked in ability (e.g. both middle ranked teams), one team is less likely to dictate or control possession/passing resulting in a higher number of passes and an equal level of play in these matches compared to playing a top standard team. Higher skilled teams have been found to successfully pass the ball and retain possession more so than lower skilled teams and generally have the skill to dictate possession and take 'control' of a game (Jones et al., 2004; Bloomfield et al., 2005 and Lago, 2007). This was supported in the current study as both, centre-backs and full-backs, as well as at team level reported a significantly higher total number of successful passes against middle compared with bottom standard opponents. Although generally, successful teams have been found to adopt a possession style of play, Lago (2009) indicated teams may alter their style of play according to situation variables, therefore the quality of the teams sampled may explain only some of the variations in patterns of play.

The current study found that centre-backs, full-backs, and players FB2, CM2 had significantly higher possession gains against middle compared with top standard opponents. Mostly, wherever possession gains were significant the same pattern of significance was found for possession loss; highlighting possible areas within the team which have interrelated strengths and weaknesses. As expected, the study found that possession gained decreased against top standard opponents. This is not surprising given the volume of research which suggests successful teams typically have longer possession than unsuccessful teams (Grant et al., 1999; Jones, 2004). Without taking into account score line in each individual game, it is difficult to assert whether this decrease is related to the skill in keeping possession of the higher ranked team or motivational/fitness factors related to the weaker team. O'Donoghue and Tenga (2001) and Redwood-Brown et al., (2009) established that players performed less high-intensity activity when losing and winning than when the score was level. Similarly, when score is evolving i.e. conceding or scoring a goal, players in lower skilled teams may face motivational, psychological and confidence issues against higher skilled teams which can have a direct impact on possession/passing (Redwood-Brown, 2008). Lago (2009) suggested evolving score is one of the most important variables for explaining match possession. Indeed, a potential limitation of the current investigation is that evolving score was not analysed alongside different standards of opponents.

At team level, and observed for centre-backs, full-backs, and players CB2, FB3, CM2 and CM3, interceptions were significantly higher against middle compared with top standard opponents; and for full backs significantly higher against bottom compared with top standard opponents. A higher number of interceptions would be expected when playing teams of an equal standard compared to those considered higher in ability, however it would also be expected that an increase in interceptions would also be highlighted when playing bottom standard opponents, although no significant differences were found. Luhtanen (2001) found that the best ranked teams in Euro 1996 and 2000 executed a higher number of interceptions and were generally better in defence compared to unsuccessful teams. However it is more likely that as opposition standard gets higher there will be an increase in the need to intercept the ball and therefore, the significant increases seen compared to middle and bottom standard teams could be a function of the opposition having more possession increasing the need to intercept. It is clear for the analysed team that interceptions may be an important behaviour that differentiates their performance against different standards of opponents. However, the research into interceptions and their impact on performance is limited. The significance of interceptions may however, be related to the theory of perturbations. Hughes and Reed (2005) defined a perturbation as “an incident that changes the rhythmic flow of attacking and defending leading to a shooting opportunity or critical incident”. Events such as interceptions may cause changes or shifts in momentum, positively or negatively, which are categorised as critical incident or ‘turning points’.

In the current study, significant performance indicators, which are considered specific to certain playing positions (e.g. tackles and centre-back), showed invariance in the player behaviour. For example, for CB4 there were significantly higher tackles against bottom (4.7 ± 1.6) compared to playing against top standard teams (2.6 ± 2.0). A higher number of tackles against bottom standard teams shows variability in player CB4's tackling behaviour, as tackles have been considered essential to a centre-backs role (Taylor et al., 2004) and this maybe an important observation for the coach or manager to consider. This variability may be due to factors such as team strategy, pre-match preparation, opposition strategies, and psychological variables related to individual players. Therefore, the coach can use these results and implement player specific training strategies (e.g. tackling drills) to address the invariance caused by the influences of confounding variables and in turn, improve the player's future performance against top teams. Taylor et al. (2004) suggested a level of consistency of playing behaviour will exist in performers and if invariance can be found in performance indicators it can provide a practical value for coaches. Therefore player level analysis is important as these individual player differences were not always revealed in the team level analysis.

To a coach, analysis of performance profiles can be a powerful tool when implementing both training and match strategies. Understanding how individual player's performance in different situations may influence match tactics and ultimately help in team selection. In the current study, for example CM2 conducted more interceptions against middle compared with top standard teams; however, CM3 conducted less interceptions against middle compared with top standard teams. Therefore a coach is more likely to select CM3 when facing top teams and CM2 when facing middle standard teams. Significant performance indicators, which are associated with general play rather than specific positions (e.g. possession gained and centre forward), also showed large differences in player performances between the standards of opponents. For example, for CF1 there was a significantly lower number of possession gains against middle (4.1 ± 1.8) compared with top standard (8.1 ± 4.3). However, Taylor et al. (2004) suggests that possession gains are not as important to a centre forwards role and therefore a lower number of possession gains compared with penalty area entries may be expected. The results may imply that CF1

defended more when playing higher skilled opponents (because top teams have the skill level to retain possession and create more attacks) compared to lower skilled opposition.

Although the current study opens new avenues to studying player behaviour there are still a number of variables that need addressing to fully utilise the methods proposed. Confounding variables such as match location, match status (evolving score) and match outcome (win, draw and loss) were not analysed alongside standards of opponents as in previous studies (e.g. Taylor et al., 2008). Opposing teams were also grouped according to their final league position and not the league position they were in at the time the data was collected.

The study attempted to highlight the effects of different standards of opponent on observed players' performances and provide explanations for the differences. The findings suggest the differences in performance within player level are not always evident at unit and team level. Individual player's performances are affected by different confounding variables (especially when players operate in different positions) and these affects are not always noticeable in grouped data sets (Taylor et al., 2010). Interestingly, soccer clubs rarely develop position-specific training practices (Williams et al., 2003); due to the limited training time between competitive matches and resources available. The coach can implement training programs at player level that address the variation highlighted by the analysis process. For example implementing tactical strategies which can cause disruptions in play by considering potential weaknesses in opposition and developing high impact strategies that can create 'turning points' during a match. At team level, the main strategic focus may be to increase possession/passing (Lago, 2007). However, addressing individual player weaknesses in relation to possession/passing behaviour may be more beneficial in order to enhance the teams overall performance, especially in areas which have been highlighted as the key to success.

This study found significant interaction between standards of opponent on team, positional units and individual players. Explanations of these findings have been drawn from performance analysis literature, but assumptions have been made in the absence of other confounding variables. Future research should focus on player performance against different standards of opponent; however, there are strong grounds for including possession/passing behaviours at team and positional unit level. This research should incorporate both qualitative and quantitative approaches that ascertain a player's psycho-behavioural performance as well as their, physical, technical and tactical performance. The primary focus of this research was to highlight the need for individual player analysis taking into account the situational variable of opposition standard. Results from this analysis may help coaches and managers to develop player specific coaching and training protocols which go some way to address the complex interactions and influences that multiple variables have on performance behaviours.

REFERENCES

1. BATE R. Football chance: Tactics and strategy. In: *Science and Football* (Eds.). T REILLY, A LEES, K DAVIDS, W MURPHY. Spon: London, pp. 293-301; 1988. [[Back to text](#)]
2. BLOOMFIELD J, POLMAN R, O'DONOGHUE P. Effects of score-line on intensity of play in midfield and forward players in the FA Premier League. *J Sport Sci.* 2005; 23:191-193. [[Back to text](#)]
3. BRADLEY P, O'DONOGHUE P, WOOSTER B, TORDOFF P. The reliability of ProZone MatchViewer: A video-based technical performance analysis system. *International Journal of Performance Analysis in Sport.* 2007; 7:117-129. [[Abstract](#)] [[Back to text](#)]

4. DUCHER G, COURTEIX D, MEME S, MAGNI C, VIALA J, BENCHAMOU C. Bone geometry in response to long-term tennis playing and its relationship with muscle volume: A quantitative magnetic resonance imaging study in tennis players. *Bone*. 2005; 37:457-466. doi:10.1016/j.bone.2005.05.014 [Back to text]
5. DUNN A, FORD P, WILLIAMS M. A technical profile of different playing positions. *Football Insight*. 2003; 6:41-45. [Full Text] [Back to text]
6. GRANT AG, WILLIAMS AM, REILLY T. An analysis of the successful and unsuccessful teams in the 1998 World Cup. *J Sport Sci*. 1999; 17:827. [Back to text]
7. HORN R, WILLIAMS M, ENSUM J. Attacking in central areas: A preliminary analysis of attacking play in the 2001/2002 FA Premiership season. *Football Insight*. 2002; 3:31-34. [Back to text]
8. HUGHES M, EVANS S, WELLS J. Establishing normative profiles in performance analysis. *International Journal of Performance Analysis in Sport*. 2001; 1:1-26. [Abstract] [Back to text]
9. HUGHES M, FRANKS I. Analysis of passing sequences, shots and goals in soccer. *J Sport Sci*. 2005; 23:509-514. doi:10.1080/02640410410001716779 [Back to text]
10. HUGHES M, REED D. Creating a performance profile using perturbations in soccer. Paper presented at the 4th International Scientific Conference on Kinesiology. University of Zagreb, Croatia, 34-53; 2005. [Back to text]
11. HUGHES MD, BARLETT R. The use of performance indicators in performance analysis. *J Sport Sci*. 2002; 20:739-754. doi:10.1080/026404102320675602 [Back to text]
12. HUGHES MD, ROBERTSON K, NICHOLSON A. An analysis of 1984 World Cup of association football. In: *Science and Football* (Eds.). T REILLY, A LEES, K DAVID, W MURPHY. Spon: London, pp. 363-367; 1988. [Back to text]
13. JONES P, JAMES N, MELLALIEU SD. Possession as a performance indicator in soccer. *International Journal of Performance Analysis in Sport*. 2004; 4:98-102. [Abstract] [Back to text]
14. LAGO C. Are winners different from losers? Performance and chance in the FIFA World Cup Germany 2006. *International Journal of Performance Analysis in Sport*. 2007; 7:36-47. [Abstract] [Back to text]
15. LAGO C. The influence of match location, quality of opposition, and match status on possession strategies in professional association football. *J Sport Sci*. 2009; 27:1463-1469. doi:10.1080/02640410903131681 [Back to text]
16. LAGO C. To win or to lose in soccer: A matter of performance or chance? *European Journal of Human Movement*. 2005; 14:137-152. [Full Text] [Back to text]
17. LUMLEY T, DIEHR P, EMERSON S, CHEN. The importance of the normality assumption in large public health data sets. *Annual Review of Public Health*. 2002; 23:151-169. doi:10.1146/annurev.publhealth.23.100901.140546 [Back to text]
18. LUTHANEN P, BELINSKJJ A, HAYRINEN M, VANTTINEN T. A comparative tournament analysis between the EURO 1996 and 2000 in soccer. *International Journal of Performance Analysis in Sport*. 2001; 1:74-82. [Abstract] [Back to text]
19. OBERSTONE J. Differentiating the top English Premier League football clubs from the rest of the pack: Identifying the keys to success. *Journal of Quantitative Analysis in Sports*. 2009; 5:10. doi:10.2202/1559-0410.1183 [Back to text]
20. O'DONOGHUE P, TENGA A. The effect of score-line on work rate in elite soccer. *J Sport Sci*. 2001; 19:25-26. [Back to text]
21. REDWOOD-BROWN A, O'DONOGHUE P, ROBINSON G, NEILSON P. The effect of score-line on work-rate in English FA Premier League soccer. Paper presented at the 3rd International Workshop of the International Society of Performance Analysis in Sport, Lincoln, 2009. [Back to text]

22. REDWOOD-BROWN A. Passing patterns before and after goal scoring in FA Premier League soccer. *International Journal of Performance Analysis in Sport*. 2008; 8:172-182. [[Abstract](#)] [[Back to text](#)]
23. SCOULDING A, JAMES N, TAYLOR J. Passing in the soccer World Cup 2002. *International Journal of Performance Analysis in Sport*. 2004; 4:36-41. [[Abstract](#)] [[Back to text](#)]
24. TAYLOR J, MELLALIEU S, JAMES N, BARTER P. Situation variable effects and tactical performance in professional association football. *International Journal of Performance Analysis in Sport*. 2010; 10:255-269. [[Abstract](#)] [[Back to text](#)]
25. TAYLOR J, MELLALIEU S, JAMES N, SHEARER D. The influence of match location, quality of opposition, and match status on technical performance in professional association football. *J Sport Sci*. 2008; 26:885-895. doi:[10.1080/02640410701836887](https://doi.org/10.1080/02640410701836887) [[Back to text](#)]
26. TAYLOR J, MELLALIEU S, JAMES N. A comparison of individual and unit tactical behaviour and team strategy in professional soccer. *International Journal of Performance Analysis in Sport*. 2005; 5:87-101. [[Abstract](#)] [[Back to text](#)]
27. TAYLOR J, MELLALIEU S, JAMES N. Behavioural comparisons of positional demands in professional soccer. *International Journal of Performance Analysis in Sport*. 2004; 4:81-97. [[Abstract](#)] [[Back to text](#)]
28. TENGA A, LARSEN O. Testing the validity of match analysis to describe playing styles in football. *International Journal of Performance Analysis in Sport*. 2003; 3:90-102. [[Abstract](#)] [[Back to text](#)]
29. TUCKER W, MELLALIEU S, JAMES N, TAYLOR J. Game location effects in professional soccer: A case study. *International Journal of Performance Analysis in Sport*. 2005; 5:23-35. [[Abstract](#)] [[Back to text](#)]
30. VALTER D, ADAM C, BARRY M, MARCO C. Validation of Prozone: A new video-based performance analysis system. *International Journal of Performance Analysis in Sport*. 2006; 6:108-119. [[Abstract](#)] [[Back to text](#)]
31. WILLIAMS A, WILLIAMS M, HORN R. Physical and technical demands of different playing positions. *Football Insight*. 2003; 2:24-28. [[Back to text](#)]