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Analysis of teams' corner kicks defensive strategies at the FIFA World Cup 2018

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ABSTRACT

The aim of this study was to analyse corner kick defensive strategies during the 2018 FIFA World Cup. A total of 600 corner kicks from all 64 matches in the tournament were obtained from the InStat database and analysed. Data were analysed and reported as frequency counts and percentages. Chi-square test for independence (χ^2) used to test associations between key performance indicators. Results showed that 22 goals (3.7% of all corners kicks) were conceded from corner kicks. Teams conceded more goals using a zonal marking strategy (6.0%) compared to a mixed marking strategy (3.7%). There was a significant association between types of corner kicks and defensive outcomes ($\chi^2 = 111.30, V = 0.57$). Most goals were conceded from inswing corner kicks (4.6%) compared to short (3.3%) and outswing (3.1%) corner kicks. Seventeen (3.9%) goals were conceded from corners when there were no players on the goal line. Most goals came from the centre (7.0%) and the first goalpost (3.5%). These findings highlight potential strategies soccer coaches may employ for an effective defensive set-up against corners, such as employing a mixed marking method, having players positioned on the goalposts and being aware of the attacking threat posed by short corner kicks.

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Set-pieces; marking; defending; goals

1. Introduction

In soccer, goal scoring is crucial for winning games, and it has received considerable attention (Casal, Maneiro, Ardá, Losada, & Rial, 2015; Taylor, James, & Mellalieu, 2004; Tenga, Holme, Ronglan, & Bahr, 2010). Goals can be scored from open play (i.e., positional play and counter-attacks) or set pieces (i.e., corner kicks, free kicks, penalties and throw-ins) (Pulling, 2015). It has been estimated that 30–40% of goals result from a set-play situation (Casal et al., 2015). To support this, Armatas and Yiannakos (2010) reported that during the 2006 FIFA (Fédération Internationale de Football Association) World Cup in Germany, 32% of goals scored had come from a set-piece situation. Carling, Williams, and Reilly (2005) also stated that successful teams are far more efficient than their opponents at scoring from set plays (with a typical ratio for set plays to goals of 1:7 for successful teams

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compared to 1:15 for less successful teams). These findings demonstrate the importance of set-play goals for providing a winning advantage in soccer games (Pulling & Newton, 2017).

A number of studies have indicated that the majority of set-play goals have resulted from corner kicks (Carling et al., 2005; Mitrotasios & Armatas, 2014; Njororai, 2013). A corner kick is awarded to the attacking team when the whole of the ball passes over the goal line, on the ground or in the air, having last touched a player of the defending team, and a goal is not scored (FIFA, 2017). Notational analysis research has highlighted that goals from corner kicks equated to approximately 14.5% of goals scored during the 2010 World Cup tournament (Njororai, 2013). Further, when considering this as a proportion of the number of corner kicks taken, the analysis has indicated that 1.6–3.2% of corner kicks taken result in a goal (Ardá, Maneiro, Rial, Losada, & Casal, 2014; Carling et al., 2005; Sainz de Baranda & Lopez-Riquelme, 2012; Sainz de Baranda, López-Riquelme, & Ortega, 2011; Sánchez-Flores et al., 2012). While this may seem like a small proportion, it should be noted that only 10% of shots taken result in a goal (Hughes & Franks, 2005).

Goals scored from corner kicks can have a significant impact on the outcome of a match, with previous research demonstrating that a goal from a corner kick resulted in the scoring team winning or drawing the match in 76% of matches (Casal et al., 2015). Therefore, researchers have attempted to understand the notational analysis of corner-kick outcomes in relation to the frequency of corner kicks and attempts at goal (Taylor et al., 2004), style of corner kick (Carling et al., 2005; Page & Robins, 2012), scoring location (Poon, Douglas, & Hopkins, 2012; Sainz de Baranda & Lopez-Riquelme, 2012) and defensive tactics (Pulling, Robins, & Rixon, 2013). Taylor et al. (2004) analysed 217 corner kicks from 20 matches of the 2001–2002 English Premier League season and found a mean of 10.85 corner kicks per game. The authors further indicated that one in every three corner kicks was successful (i.e., a corner kick that resulted in an attempt on goal), with 8% of these successful corner kicks producing a goal (Taylor et al., 2004). Carling et al. (2005) examined corner kicks during the 2002 FIFA World Cup in Korea/Japan and reported that inswinging corner kicks were three times more successful in creating goals compared to outswinging corner kicks. Further, Sainz de Baranda and Lopez-Riquelme (2012) indicated that during the 2006 FIFA World Cup, 36.6% and 30.8% of corner kicks were delivered towards the first goalpost and second goalpost, respectively. While these studies have provided an understanding of the attacking outcomes of corner kicks (Ardá et al., 2014; Casal et al., 2015; Sainz de Baranda & Lopez-Riquelme, 2012; Taylor et al., 2004), a limitation of the findings is the lack of analysis in relation to the defensive performance aspects of a corner kick. This is an important consideration, as understanding the defensive structure and tactics may provide context to the factors which may lead to attacking corner-kick success.

To address this limitation, Pulling et al. (2013) explored defensive tactics associated with corner kicks. The authors investigated the types of defensive marking systems and defensive players positioned at goalposts for 436 corner kicks from 50 games during the 2011–2012 English Premier League season (Pulling et al., 2013). It was found that the most commonly used marking system was one-on-one marking (90.1% of total corners), with zonal marking being used less frequently (9.9% of total corners). With respect to players positioned on the goalposts, when defensive players were positioned at both goalposts, 43.1% of corner kicks led to an attempt at goal. When a defensive player was

positioned at the near goalpost only, 1.5% of corner kicks resulted in a goal being conceded (Pulling et al., 2013). Further, Pulling and Newton (2017) investigated the use of the near-post guard system (i.e., a player positioned in front of the near goalpost) and found that a player in this position was able to clear the ball 31.5% of time, indicating that they have an important defensive role at corner kicks. While the findings provide an insight into the corner-kick defensive structures of teams in the English Premier League, a main shortcoming is the sample of games analysed. The studies analysed only 13–20% of the total games played over the course of the season (Pulling & Newton, 2017; Pulling et al., 2013), and therefore it may be possible that this sample does not truly reflect the defensive tactics used by teams across the whole competition. Therefore, research is needed that analyses all games from a competition to provide an accurate assessment of the trends from that competition, rather than a small subset, which may be limited by the number of teams and games selected (or available) for analysis (Bradley et al., 2011; Kubayi, Toriola, & Paul, 2018).

While a few studies have analysed teams' defensive tactics at a corner kick in domestic league games (Pulling & Newton, 2017; Pulling et al., 2013), such information is sparse at international tournaments such as the FIFA World Cup. This is an important consideration, as it has been stated that styles of play are different based on the type of competition (i.e., domestic leagues, continental tournaments international tournaments) (Gómez, Lago-Peñas, & Pollard, 2013). Further, sports evolve due to changes in rules, use of new technology, and increases in professionalism and training processes (Norton & Olds, 2001; Wallace & Norton, 2014; Woods, Robertson, & Collier, 2017), with findings indicating that these evolutionary pressures may influence the style of play and structural tactics (Wallace & Norton, 2014). Therefore, it is important for researchers to build on previous knowledge to determine the impact of team structures from recent major tournaments to potentially inform future tactical coaching practices. By understanding the current performance trends, coaches at elite international competitions may be able to develop tactics and defensive training activities which negate the attacking output of the opposing team at a corner-kick situation. Therefore, this study aimed to analyse the corner kick defensive strategies used by teams at corner kicks during the 2018 FIFA World Cup.

2. Methods

2.1. Match sample and data collection

The sample consisted of 600 corner kicks from the 64 matches of the 2018 FIFA World Cup. Video clips of all corner kicks were obtained from the InStat database (InStat Ltd; Moscow, Russia) and analysed by the principal investigator. The outcome of each corner kick and key performance indicator were coded using an ad-hoc observational instrument created in Microsoft Excel (Microsoft Excel, Version 15.0; USA). Prior to data collection, ethical clearance was obtained from the lead institution's research ethics committee.

2.2. Performance indicators

To provide an objective evaluation of defensive tactics at corner kicks and to ensure consistency with previously published findings, key performance indicators from the literature were included and adapted for the aim of the current study. The key performance indicators included the marking set-up, types of corner kicks, defensive players positioned at goalposts, corner-kick outcomes, and area of the corner-kick outcome. Descriptions of these performance indicators have been provided in Table 1 (O'Donoghue, 2010; Pulling, 2015; Pulling, Eldridge, Ringshall, & Robins, 2018; Pulling & Newton, 2017; Pulling et al., 2013; Sainz de Baranda & Lopez-Riquelme, 2012).

2.3. Reliability testing

Intra- and inter-rater agreement tests were assessed to determine the reliability of the data. To assess intra-rater agreement, the principal investigator analysed a dataset of 60 (10%) corner kicks twice, with a seven-week interval, to avoid any possible learning effects (O'Donoghue, 2015). Kappa (κ) correlation was computed and interpreted as

Table 1. The operational definitions of each coded corner kick performance indicator (O'Donoghue, 2010; Pulling, 2015; Pulling et al., 2018; Pulling & Newton, 2017; Pulling et al., 2013; Sainz de Baranda & Lopez-Riquelme, 2012).

Variable		Description
Marking set-up	Mixed marking	Some defensive players are marking the space, while others are marking opposition players
	Zonal marking	All defensive players are marking the space, rather than a specific opposition player
Types of corner kicks	Outswing	The trajectory of the ball curves away from the goal line
	Inswing	The trajectory of the ball curves towards the goal line
	Short	A ground pass to a teammate over a short distance
Defensive players positioned at the goalposts	No players on the goal line	No defensive outfield player is positioned on the goal line
	One player at the first goalpost	Goalpost nearest the corner taker
	One player at the second goalpost	Goalpost furthest away from the corner taker
	A player on each goalpost	One player on the first goalpost and another on the second goalpost
Corner kick outcomes	Goalkeeper outcomes	The goalkeeper saves, catches or punches the ball
	Defensive outcomes	The ball is cleared out of the 18-yard box; it exits the box without any contact; it does not reach the 18-yard box or come into play; or a defensive free kick
	Attacking outcomes	The ball is cleared for another corner; the ball is recycled out of the 18-yard box; or a penalty is given
	Attempts at goal	The attacking team has an attempt at goal, excluding goals or attempts off target
		A goal is scored by the attacking team
Area of corner kick outcome	First goalpost	A corner kick heads towards the first goalpost
	Second goalpost	A corner kick heads towards the second goalpost
	Centre	A corner kick heads towards the centre of the goal
	Corner kick does not reach the intended area	A corner kick goes straight off the pitch or is played near the corner flag after taking a short corner
	Corner kick aimed straight at the goal	A player intended to score, or accidentally crossed the ball towards the goalmouth, from a corner kick
	Penalty arc	A corner kick heads towards the semicircle of the penalty area

follows: <0.20 (*poor*), 0.20–0.39 (*fair*), 0.40–0.59 (*moderate*), 0.60–0.79 (*good*) and 0.80–1.00 (*very good*) (Altman, 1991). The κ values for the performance indicators ranged from 0.85 to 0.97 and were classified as *very good*. The overall intra-reliability score was κ = 0.89, which was categorised as *very good* (Table 2).

The inter-rater agreement was assessed by the principal investigator and an analyst with three years' experience of analysing soccer performance at semi-professional and professional levels. The analyst completed a one-hour training session on the coding process and was provided with the Microsoft Excel spreadsheet for data entry. The analyst observed the same 60 (10%) corner kicks as those observed by the principal investigator. The κ values ranged from 0.66 (*good*) to 0.94 (*very good*), with a mean inter-reliability score of 0.81 (*very good*) (Table 2).

2.4. Data analysis

Descriptive statistics such as frequency counts and percentages (stated in brackets) were used to analyse the data. As most cells had expected counts less than five, which violated the theoretical assumption of a chi-square test (Thomas, Nelson, & Silverman, 2015), the corner-kick outcome data were collapsed into categories (Pulling, 2015; Pulling & Newton, 2017; Pulling et al., 2013). Attempts at goal included attempts on target (but did not result in a goal), attempts off target and goals scored. A goalkeeper (GK) outcome was defined as a GK saving, catching or punching the ball. Attacking outcomes included the ball being cleared but resulting in another corner, the ball being recycled out of the 18-yard box, or a penalty being given for the attacking team. Defensive outcomes referred to the ball being cleared out of the 18-yard box, the ball leaving the box without any contact, the ball not reaching the 18-yard box or coming into play, or a defensive free kick. Despite this collapse, the corner-kick outcome data still did not meet the assumption of chi-squared tests. Therefore, the chi-square test for independence (χ^2) was tested using the following associations: (1) marking set-up in relation to attempts at goal, (2) marking set-up in relation to defensive outcomes, (3) types of corner kicks in relation to attempts at goal, and (4) types of corner kicks in relation to defensive outcomes. Cramer's V (V) was used to calculate the effect sizes and described as small (V = 0.10), medium (V = 0.30) or large ($V \geq 0.50$) (Gravetter & Wallnau, 2007). The alpha level was set at 0.05. Statistical analyses were performed using the Statistical Package for the Social Sciences version 25.

Table 2. The intra- and inter rater reliability analysis (κ) for all corner kick performance indictors.

Variable	Intra-rater Kappa value	Inter-rater Kappa value
Marking set-up	0.90	0.78
Types of corner kicks	0.97	0.94
Defensive players positioned at the goalposts	0.87	0.87
Corner kick outcomes	0.85	0.78
Area of corner kick outcome	0.86	0.66
Overall (all variables combined)	0.89	0.81

3. Results

Overall, from the 600 corner kicks, there were 148 (24.7%) attempts at goal, resulting in 22 goals (3.7% of total corners) conceded during the tournament. Overall, this accounted for 13% of the goals scored during the entire tournament. No significant association was observed between the marking set-up and the attempts at goal when defending corner kicks ($\chi^2 = 0.33$, $V = 0.07$). Further, there was no significant association between the marking set-up and defending outcomes ($\chi^2 = 2.40$, $V = 0.10$). The marking system most frequently adopted by teams was mixed marking (88.8%), with zonal marking (11.2%) used the least (see Table 3). Teams had more defensive outcomes when they used mixed marking (58.7%) rather than zonal marking (53.7%). However, most goals were conceded when teams adopted a zonal marking structure (6.0%) in contrast to mixed marking (3.4%).

No significant association was noted between types of corner kicks and attempts at goal ($\chi^2 = 0.60$, $V = 0.06$). Outswing (43.3%) and inswing (36.2%) corner kicks were more frequently taken than short corner kicks (20.5%). Teams conceded most goals from inswing (4.6%) and short (3.3%) corner kicks. There were more attempts at goal when teams played short corner kicks (26.8%) rather than outswing (21.9%) or inswing (16.6%) corner kicks. There was a significant large association between types of corner kicks and defensive outcomes ($\chi^2 = 111.30$, $V = 0.57$). This was more evident for outswing corner kicks which were defended more successfully (61.9%). (Table 3).

In general, teams preferred not to position players on the goal line when defending corner kicks. When there were no players on the goal line, 17 (3.9%) goals were conceded. However, no goals were conceded when the teams placed a player on both the first and second goalposts. Most corner kicks were delivered towards the first goalpost (42.3%) as compared to the centre of the 18-yard box (23.8%) and the second goalpost (20.5%). More attempts at goal came from the centre of the 18-yard box (24.5%) and the second goalpost (24.4%). Teams conceded 7.0% and 3.5% of goals from the centre of the 18-yard box and the first goalpost, respectively. The corner kicks delivered towards the first goalpost tended to be successfully defended (Table 3).

4. Discussion

This study was conducted to examine the defensive tactics at corner kicks for teams competing at the 2018 FIFA World Cup. Overall, it was found that 3.7% of the goals scored during the tournament were conceded from corner kicks. This percentage is higher than previously reported in corner-kick statistics (1.6–3.2% of corner kicks resulted in a goal) from the 1994 to 2014 FIFA World Cups (Ardá et al., 2014; Carling et al., 2005; Sainz de Baranda & Lopez-Riquelme, 2012; Sainz de Baranda et al., 2011; Sánchez-Flores et al., 2012). While the percentages of corner kicks resulting in a goal seem low, it should be noted that approximately only 10% of shots taken result in a goal (Hughes & Franks, 2005), and goals scored from corner kicks have a large impact on the result of the game, with 76% of corner-kick goals leading to the scoring team winning or drawing the match (Casal et al., 2015).

From the 600 corner kicks analysed in the present study, there were 148 (24.7%) attempts at goal. In relation to World Cup tournaments, this percentage is reflective of

Table 3. The overall frequency and percentage of corner kick defensive performance indicators at the 2018 FIFA World Cup.

	Variable	Frequency	Attempts at goal	Goal	Goalkeeper outcomes	Attacking outcomes	Defensive outcomes
Marking set-up	Mixed marking	533 (88.8%)	108 (20.3%)	18 (3.4%)	49 (9.2%)	45 (8.4%)	313 (58.7%)
	Zonal marking	67 (11.2%)	18 (26.9%)	4 (6.0%)	6 (8.9%)	3 (4.5%)	36 (53.7%)
Types of corner kicks	Outswing	260 (43.3%)	57 (21.9%)	8 (3.1%)	12 (4.6%)	22 (8.5%)	161 (61.9%)
	Inswing	217 (36.2%)	36 (16.6%)	10 (4.6%)	40 (18.4%)	19 (8.8%)	112 (51.6%)
	Short	123 (20.5%)	33 (26.8%)	4 (3.3%)	3 (2.4%)	7 (5.7%)	76 (61.8%)
Defensive players positioned at the goalposts	No players on goal line	433 (72.2%)	85 (19.6%)	17 (3.9%)	33 (7.6%)	36 (8.3%)	262 (60.5%)
	One player at first goalpost	83 (13.8%)	21 (25.3%)	3 (3.6%)	13 (15.7%)	8 (9.6%)	38 (45.8%)
	One player at second goalpost	56 (9.3%)	15 (26.8%)	2 (3.6%)	4 (7.1%)	3 (5.4%)	32 (57.1%)
	Two players on both goalposts	28 (4.7%)	5 (17.8%)	0 (0%)	5 (17.8%)	1 (3.6%)	17 (60.7%)
Area of corner kick outcome	First goalpost	254 (42.3%)	44 (17.3%)	9 (3.5%)	12 (4.7%)	19 (7.5%)	170 (66.9%)
	Second goalpost	123 (20.5%)	30 (24.4%)	3 (2.4%)	16 (13.0%)	17 (13.8%)	57 (46.3%)
	Centre	143 (23.8%)	35 (24.5%)	10 (7.0%)	27 (18.9%)	10 (7.0%)	61 (42.7%)
	Corner kick does not reach the intended area	61 (10.2%)	3 (4.9%)	0 (0%)	1 (0%)	1 (1.6%)	57 (93.4%)
	Corner kick aimed straight at the goal	15 (2.5%)	13 (86.6%)	0 (0%)	0 (0%)	1 (6.7%)	1 (6.7%)
	Penalty arc	4 (0.7%)	1 (25%)	0 (0%)	0 (0%)	0 (0%)	3 (75%)
	Total	600	126 (21.0%)	22 (3.6%)	55 (9.2%)	48 (8.0%)	349 (58.2%)

previous findings highlighting that 23.7% of corner kicks resulted in a shot at goal (Sainz de Baranda & Lopez-Riquelme, 2012). However, when compared to domestic league competitions, this is a lower percentage, with Pulling et al. (2013) reporting that there were 136 (31.2%) attempts at goal from 436 corner kicks during the 2012–2013 English Premier League season. In addition, Taylor, James, and Mellalieu (2005) found that from 217 corner kicks analysed in the 2001–2002 English Premier League season, 68 (31.3%) resulted in attempts at goal, further supporting the inherent differences in the styles of play between competitions (Gómez et al., 2013). While it was not within the scope of this investigation to statistically compare levels of competitions, the finding may indicate a trend suggesting it is more difficult to create an attempt at goal from a corner kick at an international tournament. However, it should be noted that the findings from domestic leagues only considered a sub-sample of the total number of corner kicks, which may not reflect the true percentage of attempts at goal across the whole competition (Pulling et al., 2013; Taylor et al., 2004).

Despite the lower percentage of attempts at goal, the current study found a higher scoring rate compared to previously reported studies. This finding may suggest that teams competing at the 2018 FIFA World Cup were more efficient in attacking corner kicks. If a defending team does not adequately deal with a corner kick, the opposition will be more effective with their shots on target. It has also been suggested that there is an evolution in the attacking effectiveness at corner kicks, with coaches potentially acknowledging the impact of corner-kick success and developing better offensive corner-kick tactics (Sainz de Baranda & Lopez-Riquelme, 2012).

From a defensive structure perspective, the findings indicated that mixed marking (88.8%) was the most commonly used structure among the teams. This result is comparable to the findings of Sainz de Baranda and Lopez-Riquelme (2012), who found that mixed marking (96.5%) was more frequently used to defend corner kicks than zonal marking (3.5%) in the 2006 FIFA World Cup. It should also be noted that teams conceded more goals when a zonal marking system (6%) was applied compared to a mixed marking system (3.4%). This could be attributed to the confusion experienced by defensive players in cases where the ball lands between two zones, which can lead to a mix-up regarding whose responsibility it is to defend the ball. Further, the zonal marking system may result in defending players being more stationary compared to the attacking players, highlighting that defending players find it difficult to compete for a ball against an attacker who is running to meet a cross (Hughes, 1996; Pulling et al., 2018). This finding may offer important defensive tactical considerations for coaches, as it appears that the mixed marking system is more effective for defending corner kicks because tracking the movement of opposition players may prevent them from meeting the corner kick (Pulling et al., 2013).

Outswing corner kicks were more frequently taken compared to other types of corner kicks. This finding is consistent with that of Casal et al. (2015), who reported that teams preferred to play outswing crosses because they lead to more shots on target than other styles of corner kicks. It is believed that this style of corner kick is favourable as the ball swings away from the goalkeeper and towards the approaching attacking players. The potential benefit of this style of delivery is that it may reduce the goalkeeper's attempts to intercept the ball (Link, Kolbinger, Weber, & Stöckl, 2016; Pulling et al., 2018) and increase the time and space needed for the attacking player to create an attempt at goal (Casal et al., 2015). The results of this study

further demonstrated that most goals were conceded from inswing corner kicks, thus corroborating previous findings which highlighted that inswing corner kicks were generally more successful in creating goals (Carling et al., 2005). A plausible reason for this finding could be that a ball swinging towards the goal area pressures the goalkeeper and the defensive players into making contact with the ball to avoid conceding a goal.

In support of previous results (Taylor et al., 2004), the current findings highlight the relatively positive attacking outcomes from short corner kicks (i.e., goals scored). The proposed attacking benefit of this style of corner is probably due to its surprise element against a defensive team, as this type of corner kick is seldom played by most teams (Sainz de Baranda & Lopez-Riquelme, 2012; Taylor et al., 2004). Casal et al. (2015) reported that short corner kicks tend to take away the potential structural element for the defending team and move them out of position. Consequently, the dynamic set-up involved in defending a corner is disrupted, and therefore it is a more effective method to achieve a shot on goal for the attacking teams (Sainz de Baranda & Lopez-Riquelme, 2012). It should be noted that short corner kicks involving a pass and a direct cross into the 18-yard box are far more effective when executed in less than 20 seconds (Carling et al., 2005). From a defensive perspective, to effectively defend short corner kicks, a team needs to send two players quickly towards the corner flag to present a formidable resistance in a 2v2 situation (Parker, 2008).

In relation to defensive player positioning at corner kicks, the current results show that teams tend not to position players on the goalposts (72.2%), and a goal is conceded in 3.9% of these situations. In contrast, when teams placed a player on each of the goalposts, no goals were conceded in the present study. Researchers have supported the proposed defensive tactic of covering the goalposts, as it increases the chances of a successful defensive outcome (Pulling et al., 2013; Sainz de Baranda & Lopez-Riquelme, 2012). Most corner kicks (42.3%) were delivered to the first goalpost area. This result is higher than that found by Sainz de Baranda and Lopez-Riquelme (2012), who reported that 32.6% of corner kicks were delivered to the first goalpost area during the 2006 FIFA World Cup. The current results support Pulling and Newton's (2017) proposal for near-post guards being an effective defensive tactic for clearing corner kicks aimed at the first goalpost. Despite most corner kicks being delivered to the first goalpost in the present study, the highest percentage of attempts at goal came from the centre of the 18-yard box. This finding could be explained based on the fact that directing the ball into the central area tends to cause defensive errors, thereby increasing attacking players' opportunities to make first contact with the ball (Casal et al., 2015).

While the present study provides an understanding of the structure and effectiveness of defensive tactics at corner kicks, the findings should be considered in light of a number of limitations. First, the generalisability of the results is limited to the one specific international tournament, and may not reflect the characteristics of other international and domestic competitions. Future research may investigate how teams set up defensively for corner kicks in different leagues and competitions. Second, the analysis only considered the tactic at the moment of corner-kick delivery, and therefore did not consider player movements. Future research could investigate the interaction that occurs between defensive and attacking players' movements at corner-kick situations. Finally, the study is limited by the sample of corner kicks analysed and the distribution of the situations present. Future studies may consider analysing an even representation of different corner-kick situations and consider situational variables (e.g., match outcome) to provide a more representative profile of defensive structures at corner kicks.

5. Conclusion

The aim of this study was to analyse teams' tactics for defending corner kicks at the FIFA World Cup 2018. The findings highlighted that more goals were conceded when teams used zonal marking rather than mixed marking. Inswing corner kicks had the greater number of goals, followed by short and outswing corner kicks. When players were positioned on the first and second goalposts, no goals were conceded by the defending teams. The results of the present study have practical implications for coaches developing and implementing defensive tactics at corner kicks. In particular, teams should employ a mixed marking method, as this may reduce the chances of conceding a goal by tracking the movement of opposition players and preventing them from meeting the corner kick. Further, as short corner kicks have been shown to be relatively successful from an attacking perspective, teams need to be aware of this situation to ensure that the dynamic set-up involved in defending a corner kick is not disrupted, thus reducing the number of goals conceded from this situation.

Disclosure statement

No potential conflict of interest was reported by the authors.

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