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The Analysis of the Some Matches of Turkey National Futsal Team in terms of Some Performance Criteria*

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Abstract

In this study, the Turkey national futsal competitions played by the team was carried out to analyze the technical and tactical terms of some performance criteria. In this study, the competitions played in the specified time interval are presented based on winning and losing teams. The competitions are analyzed and analyzed in terms of technical and tactical parameters. The population of the study, all of the competitions of the National Futsal team Turkey, between the years 2015-2018 constitute the sample of the matches played by the National Futsal Team Turkey. In the collection of the research data, the matches presented to open access were analyzed in the computer environment by using the "Paper-Pen Method" and "e-analyze soccer" program.

According to the findings obtained in the study, of the 2203 positive passes, 63.1% were at home and 36.9% at home. Of the 271 balls won by the Futsal A national team in all matches, 79.3% were in their half, and 20.7% were in the opponent's field. Of the 427 balls lost in all matches, 47.8% in their own half area, 52.2% in the competing field.

Consequently, increasing the parameters such as the number of passes made in the opponent half field, the number of ball wins in the front zone, minimizing the difference in the number of balls won and lost, are considered to be the parameters that will directly affect the result in international competitions, it can be said that the training program should be designed for development these variables.

Keywords: Futsal, Match Analysis, Performance.

Introduction

Futsal is a very high-intensity indoor sport with more than 12 million players worldwide and has grown significantly in recent years, requiring short rest periods and movements requiring multi-plane explosions (Vähäkoitti, 2017). Futsal is one of the modern sports of today, where there is a chance to find a goal at every moment of the competition and a high-speed game characteristic with fast passes. Since the national and international teams have very similar performance levels, the analyzes made to understand the differences between the teams are increasingly important to gain an advantage in the competition (Medina et al., 2019).

The analysis is a method that can be counted, measured, and obtained mathematical results called systematic examination. Competition analysis also provides an objective review and recording of behavioral events during the match (Nara et al., 1998; Carling et al., 2005). Competition analysis is used to access information, to determine training types, and to select talent to reach decisions based on strategies to be applied in coaching. The most contributing athletes during the competition can be identified through computer programs that have become popular in recent years. Problem-solving through training can be achieved through competition analysis (Gürkan et al., 2017; Müniroğlu et al, 2008). Scientific analysis of team sports focused on determining the actual performances of the teams and reporting the stages that make up the frequency and actions. The main goal of these methods is to document who takes action, what kind of action is produced, what part of the game is observed, and when the action is carried out in an approach that describes sports behavior (McGarry, 2009). In recent years, competition analysis has been an important method used by sports scientists to identify different performance determinants in the team and individual sports. Many analysts have used analysis methods for various goals, such as technical skills and tactical behavior assessment, feedback, and analysis of movements (Shafizadeh et al., 2013; Hughes et al., 2008).

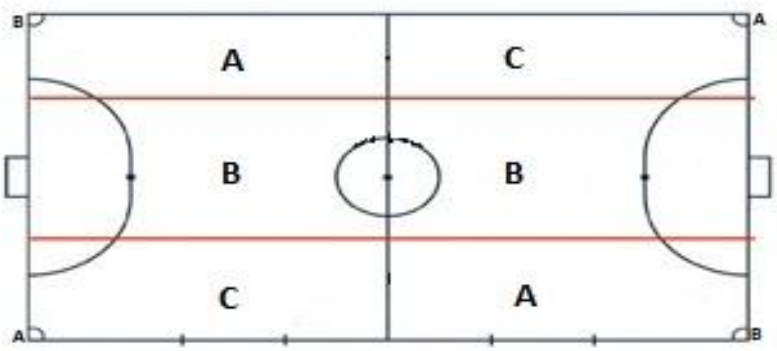
Many analysts working in the field of analysis and working at different levels have benefited from the analysis for many purposes, such as technical and tactical evaluation, providing feedback, and developing different criteria. Under the purpose, a well-designed analysis system can easily give the desired information to the team officials. This can benefit significantly from the performance to be realized. Therefore, the examination of performance criteria suitable for the branch can be considered as one of the most critical factors to reach the desired level (Göral et al., 2014). Analysis studies on futsal in the world cover areas such as some physical parameter measurements (Benvenuti et al., 2010), interpersonal coordination and finding goal opportunities (Vilar et al., 2014), futsal training with image analysis (Polidoro et al., 2012), and attempted offensive attempts (Sarmento et al., 2016). The aim of this study to examine the parameters, which might have an impact on match results, including periods of the scored and conceded goals, passes, shots, frequency of ball won and lost, free kicks in Turkey national futsal a team matches.

Method

In this research, observational research method was used for data collection. Studies on competition analysis are examined, and theoretical information is given. The matches of Turkey's national futsal A team between 2015 and 2018 were analyzed in terms of technical and tactical criteria. This research was approved by Mugla Sitki Kocman University Human Research Ethics Committee with decision number 180 and dated 22.10.2019.

Data was collected from Turkey National Futsal A Team's eight matches that were open-access and proper to analyze. The matches were analyzed by using the "Paper-Pen Method" and "e-analyze soccer program."

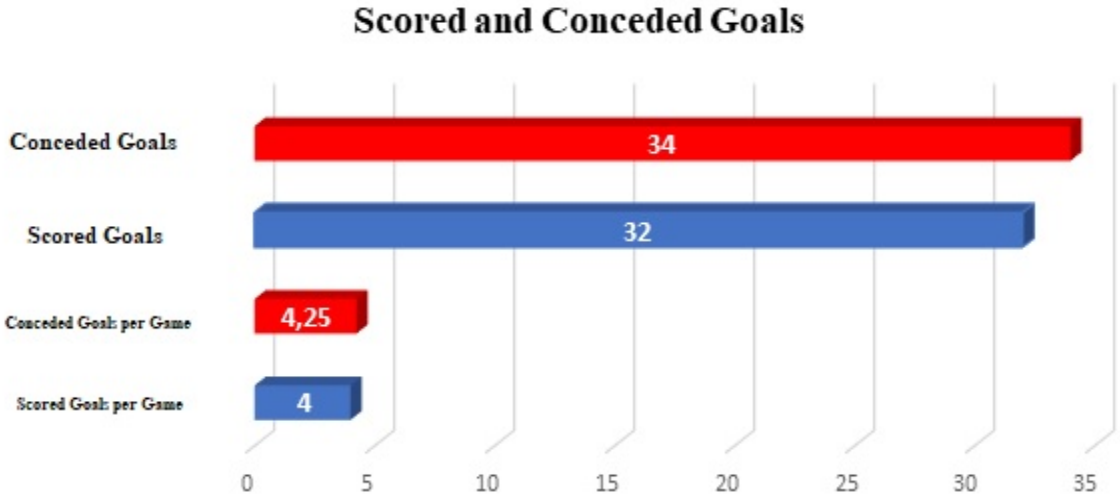
The following criteria were used to analyze the matches. In the research, the number of scored and conceded goals, corner kicks, passes completed in the opponent and own field, shots on target and missed shots in fields, fouls in fields, free kicks, cards to be seen, ball won and lost according to the fields consisted the criteria.



Data Analysis: All data obtained in the study were recorded in SPSS (version 18.0) program and interpreted by calculating frequency and percentage values.

Results

The findings obtained in the research are presented in this section in the form of tables and graphics.



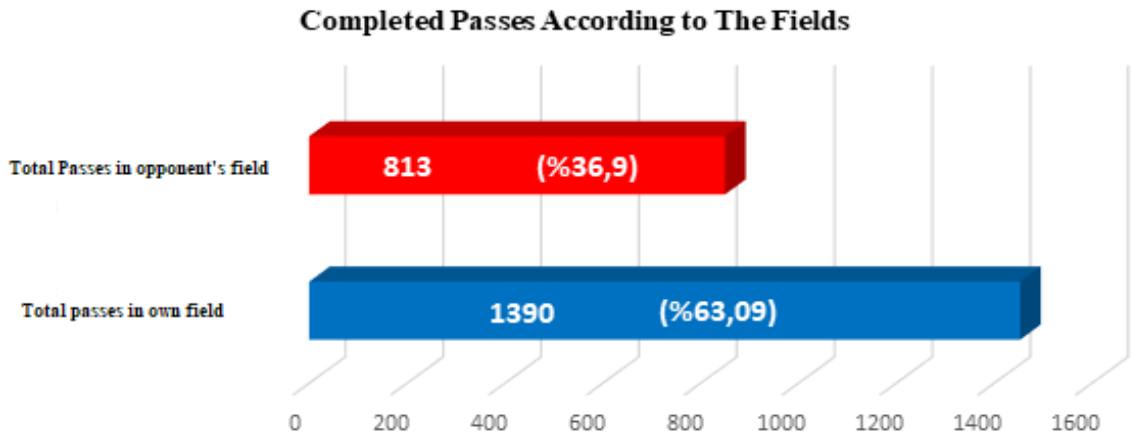
Graph 1. Scored and Conceded Goals

According to the findings obtained in the research, 32 goals were scored with an average of 4 goals per game in 8 games, while 34 goals were conceded with an average of 4.25 goals per game.

Table 1. Completed Passes According to the Fields

Passes in Own Field per Match	Passes in Opponent's Field per Match	Total Passes in Own Field		Total Passes in Opponent's Field		Total Completed Passes	
F	F	F	%	F	%	F	%
173,8	101,6	1390	63,09	813	36,90	2023	100

According to the findings obtained in the study, in 8 games played, a total of 1390 passes were completed in own field with an average of 173.8 passes per game, while a total of 813 passes were completed in the opponent filed with an average of 101.6 passes per match. It was determined that 63.09% of the majority of 2023 passes made positively took place in its own half area.

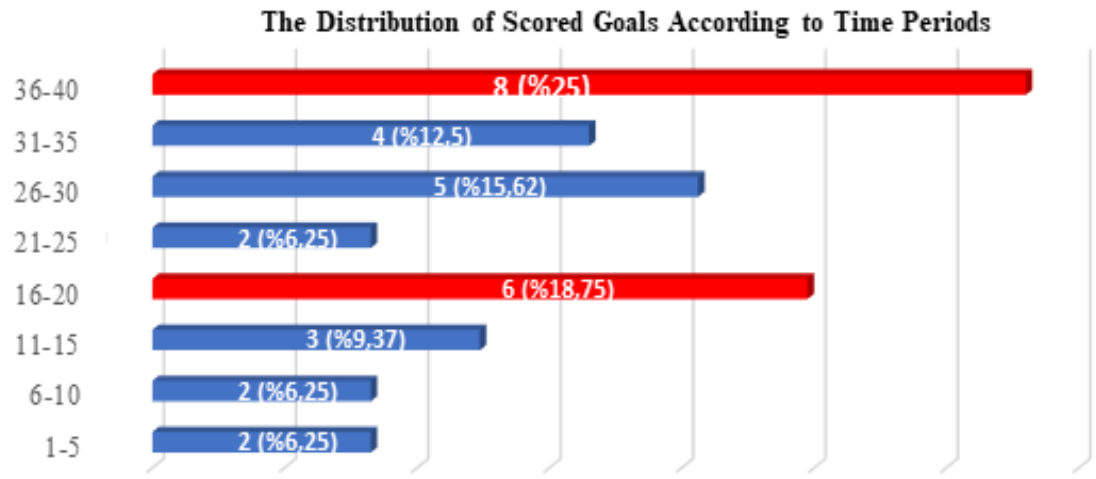


Graph 2. Completed Passes According to The Fields

Table 2. The Distribution of Scored Goals

Periods	1-5 min.		6-10 min.		11-15 min.		16-20 min.		Total	
1. Half	Goal	%	Goal	%	Goal	%	Goal	%	Goal	%
	2	6,25	2	6,25	3	9,37	6	18,75	13	40,62
Periods	21-25 min.		26-30 min.		31-35 min.		36-40 min.		Total	
2. Half	Goal	%	Goal	%	Goal	%	Goal	%	Goal	%
	2	6,25	5	15,62	4	12,50	8	25,00	19	59,38
Total	4	12,50	7	21,87	7	21,87	14	43,75	32	100

In the competitions played, 13 goals (40.62%) were scored in first halves with an average of 1.62 goals, and 19 goals (59.38%) were scored in second halves with an average of 2.38 goals. The last periods of both the 1st and the 2nd halves were determined as the periods with the highest goals rate (14 goals - 43.75%).

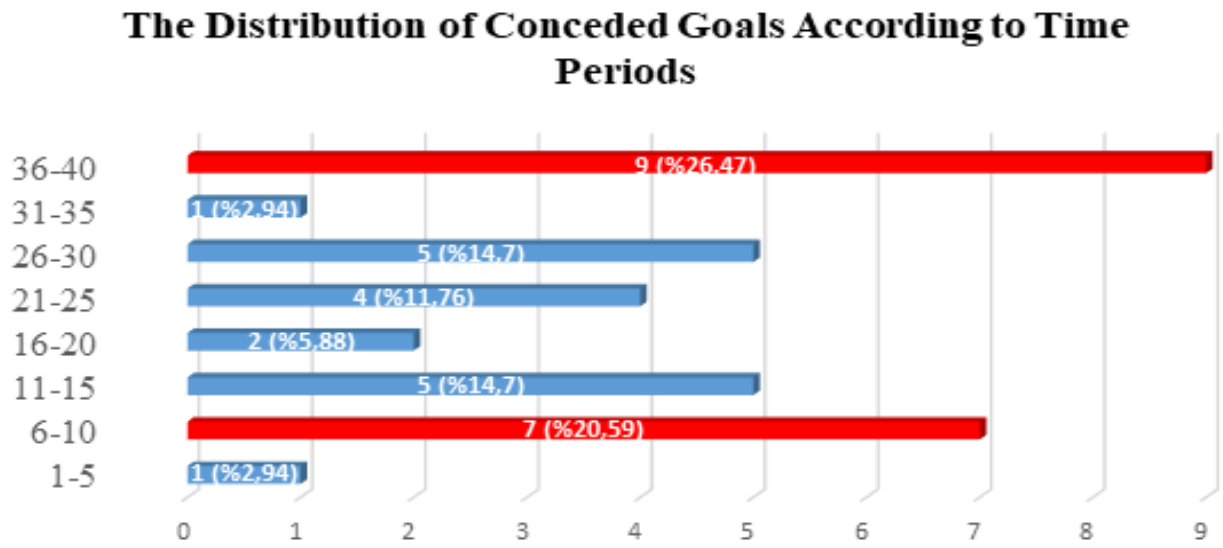


Graph 3. The Distribution of Scored Goals According to Time Periods

Table 3. The Distribution of Conceded Goals

Periods	1-5 min.		6-10 min.		11-15 min.		16-20 min.		Total	
1. Half	Goal	%	Goal	%	Goal	%	Goal	%	Goal	%
	1	2,94	7	20,59	5	14,70	2	5,88	15	44,12
Periods	21-25 min.		26-30 min.		31-35 min.		36-40 min.		Total	
2. Half	Goal	%	Goal	%	Goal	%	Goal	%	Goal	%
	4	11,76	5	14,70	1	2,94	9	26,47	19	55,88
Total	5	14,70	12	35,29	6	17,64	11	32,35	34	100

In the competitions played, it was determined that 15 goals (44.12%) were conceded in the 1st halves with 1.87 goals average, and 19 goals (55.88%) were conceded in the 2nd halves with 2.38 goals average. When the conceded goals were analyzed by half, it was found that the highest number of goals were conceded in the second five-minute period of the first half (7 goals - 20.59%) and the last five-minute period of the second half (9 goals - 26.47%).

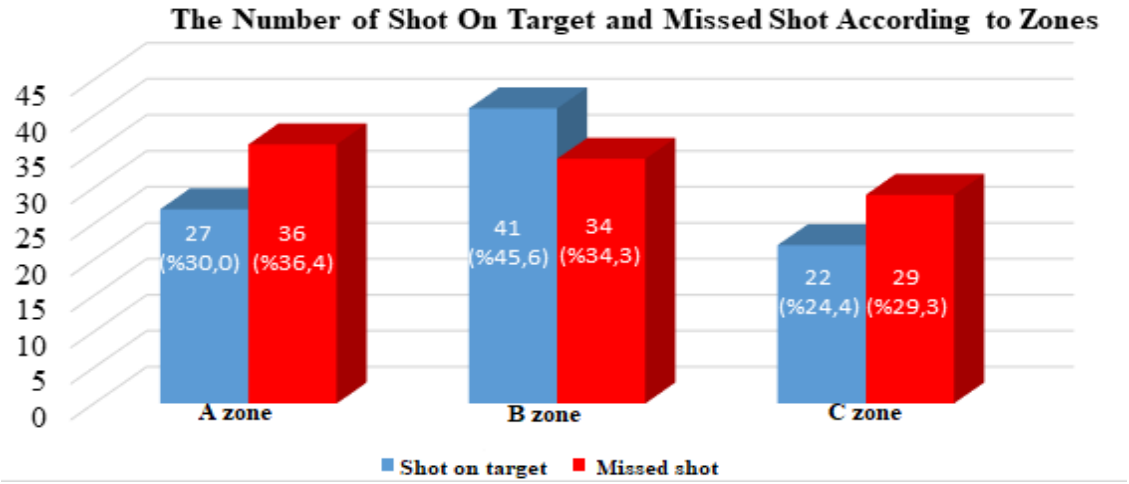


Graph 4. The Distribution of Conceded Goals According to Time Periods

Table 4. The Number of Shot On Target and Missed Shot in the Zones of A, B, and C

	A Zone		B Zone		C Zone		Total	
	F	%	F	%	F	%	F	%
Shot on Target	27	30,0	41	45,6	22	24,4	90	47,62
Missed Shot	36	36,4	34	34,3	29	29,3	99	52,38
Total	63	33,3	75	39,7	51	27,0	189	100

Table 4 presented the number of shot on target and missed shot in the zones of A, B, and C. While the highest number of shots (75 - 39.7%) and shots on target (45.6%) were from the central zone B, the highest rate in missed shots was found in the A zone (36.4%). While 90 of the 189 shots taken were on target (47.62%), 99 were missed (52.38%).

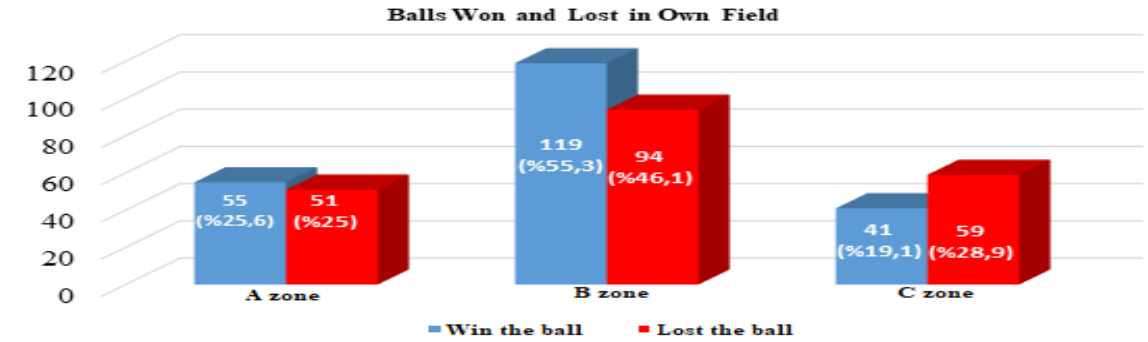


Graph 5. The Number of Shot on Target and Missed Shot According to Zones

Table 5. The Number of Ball Won and Lost in the Zones of A, B, and C in Own Field

	A Zone		B Zone		C Zone		Total	
	F	%	F	%	F	%	F	%
Won	55	25,6	119	55,3	41	19,1	215	100
Lost	51	25,0	94	46,1	59	28,9	204	100

Table 5 shows the number of wined and lost the ball in the zones of A, B, and C. When the numbers of both balls won and lost are evaluated, it is seen that the zone with the highest number of ball wins and balls lost is central zone B in own field. It was determined that the number of balls won in the B zone constitutes 55.3% of the total number of balls won, while the number of balls lost in the same region constitutes 46.1% of the total.

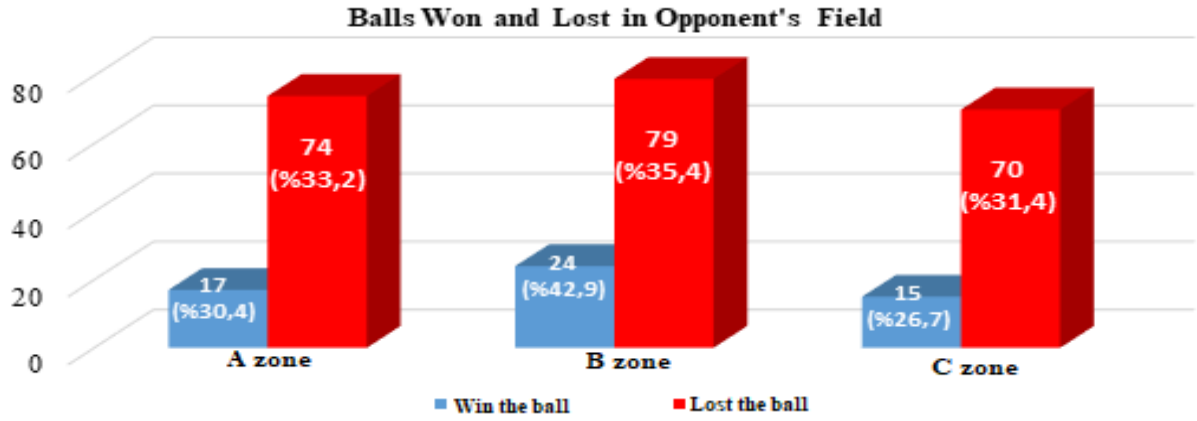


Graph 6. Won and Lost Balls in the Zones of A, B, and C in Own Field

Table 6. The number of Won and Lost Balls in the Zones of A, B, and C in Opponent's Field

	A Zone		B Zone		C Zone		Total	
	F	%	F	%	F	%	F	%
Won	17	30,4	24	42,9	15	26,7	56	100
Lost	74	33,2	79	35,4	70	31,4	223	100

Table 6 displays the number of won and lost balls in the zones of A, B, and C in the opponent's field. When the numbers of both balls won and lost are evaluated, it is seen that the zone with the highest number of ball wins and balls lost is central zone B in the opponent's field. It was determined that the number of balls won in the B zone of the opposing half field constitutes 42.9% of the total number of balls won, while the number of balls lost in the same zone constitutes 35.4% of the total.

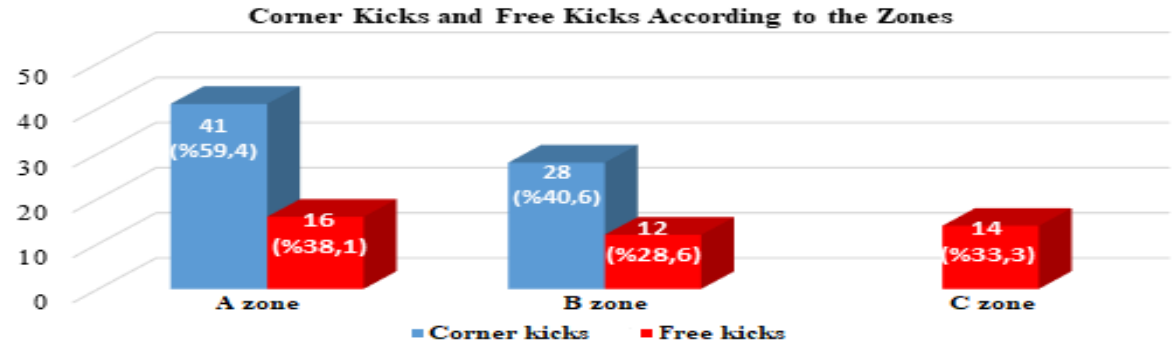


Graph 7. Won and Lost Balls in the Zones of A, B, and C in Opponent's Field

Table 7. Corner Kicks in the Zones of A and B, and Free Kicks in the Zones of A, B, and C

	A Zone		B Zone		C Zone	Total		
	F	%	F	%	F	%	F	%
Corner Kick	41	59,4	28	40,6		69	100	
Free Kick	16	38,1	12	28,6	14	33,3	42	100

Table 7 represents the corner kicks in the zones of A and B, and free kicks in the zones of A, B, and C. 59.4% of the corner kicks used from zone A and 40.6% from zone B. Although free distributions were seen in the number of free kicks, it was determined that the highest number of free-kicks were used from A zone (38.1%).

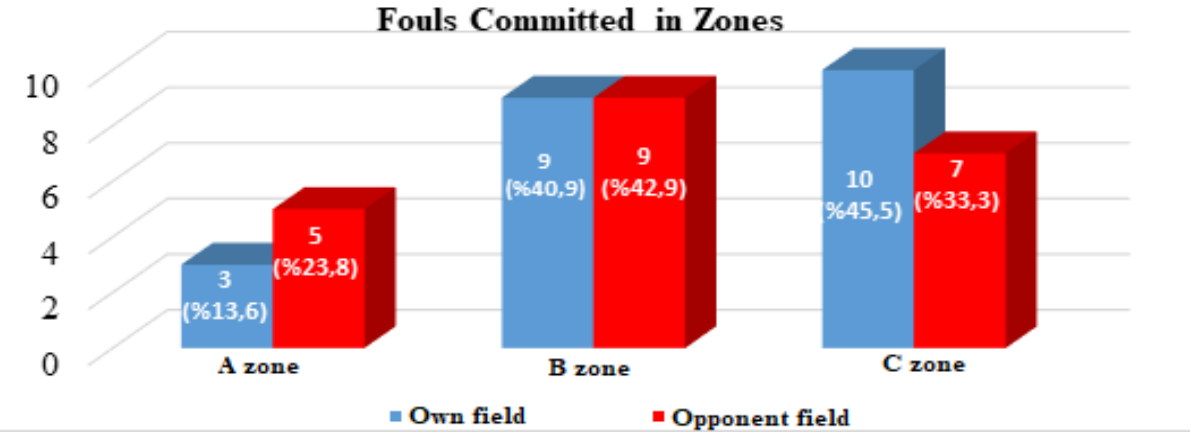


Graphic 8. Corner Kicks in the Zones (A and B), and Free Kicks in the Zones (A, B, and C)

Table 8. The number of Fouls Committed According to Zones

	A Zone		B Zone		C Zone		Total	
	F	%	F	%	F	%	F	%
Own Field	3	13,6	9	40,9	10	45,5	22	100
Opponent's Field	5	23,8	9	42,9	7	33,3	21	100
Total	8	18,6	18	41,9	17	39,5	43	100

Table 8 shows the number of Fouls Committed According to Zones in own and opponent's fields While it was determined that the national A team committed the highest number of fouls in its own half in the C zone (45.5%), it was found that the area with the highest number of fouls in the opponent half was the B zone (42.9%).



Graph 9. The number of fouls committed in zones

Discussion and Conclusion

In this study, the Turkey national futsal competitions played by the team (2015-2018) was carried out to analyze the technical and tactical terms of some criteria. In the study, the competitions played in the specified time interval were presented based on the winning and losing teams, and the competitions were analyzed in terms of technical and tactical parameters.

In the matches of the Futsal national A team, 32 goals were scored with an average of 4 goals per game, while 34 goals were conceded with an average of 4.25 goals per game.

In the competitions played, 13 goals (40.62%) were scored in first halves with an average of 1.62 goals, and 19 goals (59.38%) were scored in second halves with an average of 2.38

goals. The last periods of both the 1st and the 2nd halves were determined as the periods with the highest goals rate (14 goals - 43.75%). It was determined that 15 goals (44.12%) were conceded in the 1st halves with 1.87 goals average, and 19 goals (55.88%) were conceded in the 2nd halves with 2.38 goals average. When the conceded goals were analyzed by half, it was found that the highest number of goals were conceded in the second five-minute period of the first half (7 goals - 20.59%) and the last five-minute period of the second half (9 goals - 26.47%). A total of 1390 passes were completed in own field with an average of 173.8 passes per game, while a total of 813 passes were completed in the opponent filed with an average of 101.6 passes per match. It was determined that 63.09% of the majority of 2023 passes made positively took place in its own half area. In the study, where Göral et al. (2014) analyzed the competitions played in the 2012 FIFA Futsal World Cup, it was found that the maximum number of goals in the competitions was between 36-40 minutes with 61 goals (17.47%). In the study in which the 2012 Futsal World Cup was analyzed by Abdel-Hakim (2014), it was found that the highest number of goals (32.95%) was scored in the last periods between 31 and 40 minutes. Göral (2018) determined that the highest number of goals was scored in the last section between 36-40 minutes in the study that analyzed the competitions played in UEFA Futsal Euro 2016. Similarly, studies revealed that the goals in the last period of competitions were scored in the last period. (Armatas et al., 2010; Kubayi et al., 2019; Armatas et al., 2007; İmamoğlu et al., 2011; Mahamad Ali et al., 2015; Michailidis et al., 2013; Göral et al., 2012; Njororai, 2013; Giampietro et al., 2013; Göral, 2016; Cerrah et al., 2016).

In a study by Göral (2015) on the pass success percentages of successful teams, it was determined that the teams that were successful in the tournament had a very high pass success rate of 78.22%. In the study conducted by Bostancı et al. (2017), when the positive, negative, and total shot count values taken by the teams were examined, it was found that the most positive, negative, and total shot count belonged to the first three teams of the league. Konefal et al. (2019) emphasized that in winning a competition, players should take more shots in general, these shots should be on target, as well as increasing ball possessions and completed pass rate.

The fact that the size of the futsal area is narrower means that it can be shot from many parts of the field. Along with other steps, compared to football, futsal has some basic shooting principles. If the shooting takes place easily and slowly for the goalkeeper in football, the goalkeeper can quickly start a counterattack for the team (Şenel, 2016). While the highest number of shots (75 - 39.7%) and shots on target (45.6%) were from the central zone B, the highest rate in missed shots was found in the A zone (36.4%). While 90 of the 189 shots taken were on target (47.62%), 99 were missed (52.38%). Göral et al. (2014) stated that in the Futsal World Cup, the shot on target rate of the teams that won the matches (62.2%) was quite higher than the teams who lost the matches (37.8%). Alvurdu (2013), in his study of the technical and tactical analysis of Turkey futsal national team in the Euro 2012 group match, Alvurdu (2013) found that the teams that won the game took more shots than the losing teams.

In the study on competitions played in Futsal Euro 2016 by Göral (2018), it was pointed out that such criteria can be accepted as essential factors in winning matches by emphasizing the importance of increasing the number of shots on target in competitions. Chen (2011) found that the majority of shots were taken between the distant penalty point and the halfway field (47%). Sarmento et al. (2016) also showed that the majority of the goals were scored in the offensive position with the inside of foot from the central area. Therefore, shot on goal in the futsal depends not only on the shooter but also on the defensive performance behavior.

When the numbers of both balls won and lost are evaluated, it is seen that the zone with the highest number of ball wins and balls lost is central zone B in own field. It was determined that the number of balls won in the B zone constitutes 55.3% of the total number of balls won, while the number of balls lost in the same region constitutes 46.1% of the total. When the numbers of both balls won and lost are evaluated, it is seen that the zone with the highest number of ball wins and balls lost is central zone B in the opponent's field. It was determined that the number of balls won in the B region of the opposing half field constitutes 42.9% of the total number of balls won, while the number of balls lost in the same region constitutes 35.4% of the total. Gómez et al. (2015) found that the most valuable possession of the ball was achieved, along with the offenses ending in the penalty area, when the teams used a free-kick, the team was on the counterattacks, and the defending team defended on the half-court. Göral et al. (2014) emphasized that many and accurate shots were taken in competitions are considered as an essential criterion in winning the matches.

Vilar et al., (2014) used ecological dynamics as a theoretical explanation for creating goal opportunities or preventing these opportunities during futsal. They have included the active role of competitors in performance analysis in shaping each other's performance behaviors and influencing the outcomes of the game. Distinctive patterns of movement coordination between the shooter, the closest defender, and the ball's position have been identified, leading to the creation and prevention of goal opportunities.

According to the findings of the study, 32 goals were scored with an average of 4 goals per game in the analyzed matches, 34 goals were conceded with an average of 4.25 goals per game, 63.1% of the decisive passes were completed in own field and 36.9% in the opponent. While 79.3% of the balls won in all matches were in their own half of the field, 52.2% of the balls lost in all matches were found to be in the opponent's field. While the highest score in both the scored and conceded goals occurs in the second half of the competitions, it was found that the highest number of goals scored and conceded according to the periods in the matches were in the last 5-minute periods of the second half. Consequently, increasing the parameters such as the number of passes made in the opponent half field, the number of ball wins in the front zone, minimizing the difference in the number of balls won and lost, are considered to be the parameters that will directly affect the result in international competitions, it can be said that the training program should be designed for development these variables.

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