

ANALYSIS OF DIFFERENCE IN PERFORMANCE IN SELECTED SOCCER SKILLS AMONG PLAYERS OF DIFFERENT POSITIONS

Habib SK¹
Ashoke Kumar Biswas²

ABSTRACT

The purpose of this study was to analyse of difference in selected football skills among different positional players in soccer. A total of 40 soccer players from B.P.Ed and M.P.Ed sections of Department of Physical Education, Jadavpur University, were selected as subjects. They were classified into different groups: goalkeeper (n=10), defender (n=10), midfielder (n=10), and forward (n=10) according to position of play. All subjects were tested for performance in selected fundamental skills of soccer - the Passing, Dribbling, Heading, and heading accuracy. Collected data were analyzed using appropriate statistical techniques. Results indicated significant difference between defenders and goalkeepers; and defenders and midfielders in performance of passing. Significant difference also appeared between goalkeepers and other positional players in dribbling.

Keywords: Soccer; fundamental skills of soccer; Positional players

INTRODUCTION

Football, which is also known as Soccer, is probably world's most popular sport, played in practically every nation at varying levels of competence. Football may be played competitively or for fun, as a career, a means of keeping fit or simply a recreational pursuit (Reilly, 1996). Soccer is played between two teams comprising of 11 players. Each team has one goalkeeper and ten outfield players. The outfield players are closely grouped into the following positions, Defenders, Midfielders and Forwards. Each of these eleven players in a team has specific role to play during game situation for achieving better performance of the team.

In the game of soccer, various skills, strategies, and physical elements are required to perform well. Specialized training for each position is required to improve these conditions. A forward must have quick judgment and the ability to find holes in the opposing defence, midfielder needs agility and must be adept at long and short passing, and a defender should be able to jump high as well as be effective at headers and tackling (Kim, 2000).

One of the most important elements for a soccer player is endurance. Rienzi et al. (2000) reported that midfielders cover the greatest overall distance while acting as a link between the defence and

attack. Reports on the individual fitness and physical characteristics of each position can provide important information on improving match results. The somatotype components and physical abilities of soccer players are not significantly different by position (Noh et al., 2015; Ruas et al., 2015), but Gil et al.(2008) reported a difference in size and physical ability according to position. Therefore, more research on this topic is required despite limitations in training programs for youth players.

Some studies have reported that forwards have higher performance capacity (Gil et al., 2007) than defenders and goal keepers. Again, Malina et al. (2005) reported no significant differences in ball control, dribbling, passing, and shooting in youth players based on position, whereas a report by Lee et al. (2013) reveals that long distance kicking power was greater for mid-fielders.

The purpose of this study was to analyze the performance of different positional groups of soccer players on basic soccer skills and compare them.

MATERIALS AND METHODS

The purpose of this study was to analyse the difference of selected football skills among different positional players of soccer. A total of forty soccer players were selected as subjects (who were

¹Research scholar, Department of Physical Education, Jadavpur University, Mob No- 8293148655, Email- habib121086@gmail.com

²Professor, Department of Physical Education, Jadavpur University, Mob No- 9434239919, Email- akbiswas_05rediffmail.com

Analysis of Difference in Performance in Selected...

the students of Jadavpur University B.P.Ed and M.P.Ed course). They were divided into four equal sized groups of ten on the basis of position of play.

Selected basic soccer skills were (i) passing, (ii) dribbling, (iii) Heading and (iv) Heading accuracy.

Distribution of subjects on the basis of Playing Position.

Sl.No	Position of Players	No of Players
1.	Goalkeeper	10
2.	Defender	10
3.	Forward	10
4.	Midfielder	10

Mor Christian Soccer skill tests were used to measure the performance of passing and dribbling. Performance of heading was assessed by Van Rossum and Wijbengasoccer Skill test and Performance of heading accuracy was assessed by Nelson and Johnson Soccer skills test.

For measuring football skills test following tools used:

Sl.No	Name of the Skill	Measure by Test.
1.	Passing	Mor-Christian Soccer Skill test.
2.	Dribbling	Mor-Christian Soccer Skill test.
3.	Heading	Van Rossum and Wijbenga soccer Skill test
4.	Heading Accuracy	Nelson and Johnson Soccer skills test

STATISCAL PROCEDURE:

Following statistical technique will be used for the purpose of research work

1. Descriptive statistics used.

2. ANOVA.

3. Post Hoc Test.

And also Collected data were analyzed using appropriate statistical procedures.

RESULTS AND DISCUSSION

Performance scores of different groups of soccer players in the basic skill of passing have been presented in Table-1. It is seen from the table values that different groups of soccer.

Table no- 1

Mean scores of different groups in Passing

Sl.N	Group	N of Student	Mean
1.	Goalkeeper	10	6.90±1.19
2.	Defender	10	5.20±2.29
3.	Midfielder	10	7.50±2.59
4.	Forward	10	6.10±1.28

Players had different performance scores in Passing. The highest mean value of 7.50 was for midfielder and the lowest mean value of 5.20 was for the defender. In order to test whether the inter group difference was statistically significant, ANOVA was used. Table-2 shows the results.

Table no-2

ANOVA to test significance of difference among mean values in Passing

Skill	Sum of Squares	df	Mean square	F- Value	Level of significance
Passing	29.87	(r-1)=3	9.958	2.638	.064
	135.90	(N-r)=36	3.775		
	165.77	N-1=39			

The results shown in above table clearly indicate that the calculated 'F' value was not significant at 0.05 level. So, it is understood that the difference among the groups of soccer players in Passing was not statistically significant.

Performance scores of different groups of soccer players in the basic skill of dribbling have been presented in Table-3. It is seen from the table values that different groups of soccer.

Table no-3

Mean scores of different groups in Dribbling.

Sl.No	group	N of Student	Mean
1.	Goalkeeper	10	45.90±3.60
2.	Defender	10	42.00±3.12
3.	Midfielder	10	42.20±5.43
4.	Forward	10	40.10±3.54

Players had different performance scores in Dribbling. In order to test whether the inter group difference was statistically significant, ANOVA was used. Table- 4 shows the results.

Table-4

ANOVA to test significance of difference among mean values in Dribbling

Skill	Sum of Squares	df	Mean square	F- Value	Level of significance
Dribbling	176.50	3	58.833	3.630*	.022*
	583.40	36	16.206		
	759.90	39			

It is seen from the table that the calculated value of 'F' was significant at 0.05 levels. SO, it was understood that there was a statistically significant difference among the soccer groups in the skill of Dribbling. In order to identify the exact location of the difference, the technique of Least Significant Difference (LSD) was used. Table - 5 shows the results.

Table -5

LSD to identify exact location of inter group difference in Dribbling.

Goal keepers	Mean scores (time in sec) of			Mean difference	Significance
	Defenders	Midfielders	Forward		
45.90	42.00			3.90	.037
45.90		42.20		3.70	.047
45.90			40.10	5.80	.003
	42.00	42.20		-0.20	.912
	42.00		40.10	1.90	.298
		42.20	40.10	2.10	.251

Table values clearly indicate that the goal keepers took significantly greater time with mean value of 45.90s than defenders, midfielders and forwards. This indicates that goal keepers had the lowest dribbling ability than other three groups of positional players.

It is also seen that the minimum time taken for dribbling test was the forward group indicating that this group was superior to all other groups in ability to dribble. But the difference among the three groups of midfield players (Defenders, Midfielders and

Forward) was not statistically significant.

Performance scores of different groups of soccer players in the basic skill of heading have been presented in Table-6. It is seen from the table values that different groups of soccer.

Table no-6
Mean scores of different groups in Heading

Sl.No	Group	N of Student	Mean
1.	Goalkeeper	10	10.40±8.84
2.	Defender	10	6.10±2.07
3.	Midfielder	10	11.80±13.52
4.	Forward	10	9.50±9.12

Players had different performance scores in Heading. In order to test whether the inter group difference was statistically significant, ANOVA was used. Table- 7 shows the results.

Table no-7
ANOVA to test significance of difference among mean values in Heading.

Skill	Sum of Squares	df	Mean square	F- Value	Level of Significance
Heading	176.50	3	58.833	.675	.573
	3137.40	36			
	3313.90	39			

The results shown in above table clearly indicate that the calculated 'F' value was not significant at 0.05level. So, it is understood that the difference among the groups of soccer players in Heading was not statistically significant.

Performance scores of different groups of soccer players in the basic skill of heading accuracy have been presented in Table-8. It is seen from the table values that different groups

Table no-8
Mean scores of different groups in Heading Accuracy

Sl.No	Group	N of Student	Mean
1.	Goalkeeper	10	5.20±5.71
2.	Defender	10	5.20±5.47
3.	Midfielder	10	2.30±4.52
4.	Forward	10	7.00±3.49

Soccer players had different performance scores in Heading. In order to test whether the inter group difference was statistically significant, ANOVA was used. Table- 9 shows the results.

Table no-9
ANOVA to test significance of difference among mean values in Heading Accuracy

Skill	Sum of Square	df	Mean square	F -Value	Significance
Heading Accuracy	113.47	3	37.825	1.588	.209
	857.30	36	23.814		
	970.77	39			

The results shown in above table clearly indicate that the calculated 'F' value was not significant at

0.05level. So, it is understood that the difference among the groups of soccer players in Heading Accuracy was not statistically significant.

CONCLUSION

On the basis of results obtained by statistical analysis of data, following conclusions were drawn: I) Forward group of soccer players were found to be best among the selected groups of soccer players. All the three field groups of players – defenders, midfielders and forwards, were found to be significantly better than the group of goal keepers in dribbling.

ii) There was no statistically significant difference found among the selected groups of soccer players in other selected basic skills.

REFERENCES

- Al-Hazzaa HM, Chukwuemeka AC. Echocardiographic dimensions and maximal oxygen uptake in elite soccer players. Saudi Med J. 2001;22:320–325. [PubMed]
- Son JS, Jeong JU, Kim JH, Lim JS, Kim H. The analysis of the anaerobic capacity in different soccer players' positions. J Nat Sci. 2003;19:131–140.
- Davis JA, Brewer J, Atkin D. Pre-season physiological characteristics of English first and second division soccer players. J Sports Sci. 1992;10:541–547. [PubMed]
- Eklom B. Applied physiology of soccer. Sports Med. 1986;3:50–60. [PubMed]
- Gil SM, Gil J, Ruiz F, Irazusta A, Irazusta J. Physiological and anthropometric characteristics of young soccer players according to their playing position: relevance for the selection process. J Strength Cond Res. 2007;21:438–445. [PubMed]
- Gil SM, Hong CB, Kim KJ. Comparison of physique and physical fitness following to highschool soccer players' position. J LivSci Res. 2008;34:235–245.
- Kim YK. A fitness profiles of the professional soccer players by each position. Korean J Sports Med. 2000;18:217–226.
- Krustrup P, Mohr M, Amstrup T, Rysgaard T, Johansen J, Steensberg A, Pedersen PK, Bangsbo J. The yo-yo intermittent recovery test: physiological response, reliability, and validity. Med Sci Sports Exerc. 2003;35:697–705. [PubMed]
- Lee WJ, Lee SJ, Lee JJ. A study on the analysis of stamina, anaerobic power and performance of varying positions among high school soccer players. J Coach Dev. 2013;15:132–140.
- Malina RM, Cumming SP, Kontos AP, Eisenmann JC, Ribeiro B, Aroso J. Maturity-associated variation in sport-specific skills of youth soccer players aged 13–15 years. J Sports Sci. 2005;23:515–522. [PubMed]
- Noh JW, Kim MY, Lee LK, Park BS, Yang SM, Jeon HJ, Lee WD, Kim JH, Lee JU, Kwak TY, Lee TH, Kim JY, Kim J. Somatotype and body composition analysis of Korean youth soccer players according to playing position for sports physiotherapy research. J PhysTher Sci. 2015;27:1013–1017. [PMC free article] [PubMed]
- Reilly T, Bangsbo J, Franks A. Anthropometric and physiological predispositions for elite soccer. J Sports Sci. 2000;18:669–683. [PubMed]