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Effect of variation in day time and session on speed ability of soccer players

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Abstract

The objective of present study was to explore the effect of variation in day time and session on speed ability of soccer players. To achieve this objective, this study was conducted on state and university level male soccer players of Haryana. 18-25 years of age group. A total forty (N=40) soccer players were selected randomly from four districts of Haryana namely Hisar, Fatehabad, Sirsaand and Jind. To check the speed ability of players, 30 yard dash Test was used. The Speed was measured in the nearest 1/10 of a second by 30 yard dash. In order to find out the effect of day time and seasonal variations on speed the two way analysis of variance (ANOVA) was employed. When 'F - Test' value was found significant then Scheffe's Post-Hoc test was applied. Data was analyzed with the help of Statistical Package for the Social Sciences (SPSS) 17.0. The level of significance was set at 0.05 percent ($p<0.5$).

Keywords: Variation, soccer players, ANOVA, SPSS, speed

Introduction

For centuries, man has been looking at the universe and trying to unrevealed its mysteries and understand it's working. The execution of competitor is conceivable due to synchronize and coordinated working of some powerful procedure of the body which is physiological, mental, biochemical and psycho-physiological are in nature. Alongside these, the natural conditions, for example, climate, atmosphere, elevation, temperature, seasons and so on may likewise have their impact on games execution of a person. Change in the every day mood of the useful limit of various frameworks which are synchronized to a 24 hour day, watch two impossible to miss angles. One of them is the prime ward varieties in the levels of physiological process, communicated as circadian range or circadian plentifulness. Sports execution that happens a few hours previously or after the circadian pinnacle 'window' will be conceivably exposed to not exactly ideal execution.

Method and Procedure

This study was conducted on state and university level male soccer players of Haryana. 18-25 years of age group. A total forty (N=40) soccer players were selected randomly from four districts of Haryana namely Hisar, Fatehabad, Sirsaand and Jind. To check the speed ability of players, 30 yard dash Test was used. The Speed was measured in the nearest 1/10 of a second by 30 yard dash. In order to find out the effect of day time and seasonal variations on speed the two way analysis of variance (ANOVA) was employed. When 'F - Test' value was found significant then Scheffe's Post-Hoc test was applied. Data was analyzed with the help of Statistical Package for the Social Sciences (SPSS) 17.0. The level of significance was set at 0.05 percent ($p<0.5$).

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Table 1: Means and std. Deviation of speed at different day time and season

Season	Diurnal	Mean	Std. Deviation	N
Winter	Morning	4.5911	.28817	40
	Evening	4.5781	.27108	40
	Total	4.5735	.27527	80
Summer	Morning	4.6221	.27984	40
	Evening	4.5942	.28331	40
	Total	4.5991	.27233	80
Total	Morning	4.6031	.28485	80
	Evening	4.5921	.28257	80
	Total	4.5863	.27215	160

Table 1 confirms that mean value of speed in the evening and morning during winter was 4.5911 seconds and 4.5781 seconds respectively whereas the mean value of speed in the evening and morning during summer was 4.6221 seconds and 4.5942 seconds respectively. The total means value of speed in the evening and morning during both season (winter and summer) was 4.6031 seconds and 4.5921 seconds respectively.

The analysis for normality, examining regular skewness and the Shapiro-Wilks analysis indicated the data were

statistically normal. The analysis for homogeneity of variance was not significant, *Levene F* (3, 156) = .84, *p* = .397, demonstrating that this statement underlying the application of the two way analysis of variance was met. Significant level of 0.05 was set for the early analyses. The results of table 1 are also demonstrated in figure: 1.

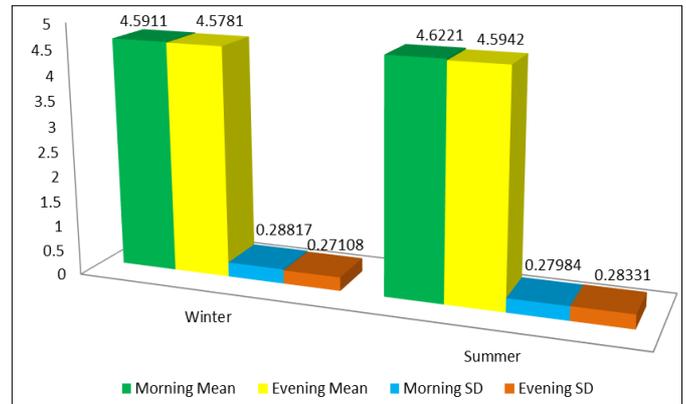


Fig 1: Means and std. Deviation of speed at different day time and season

Table 2: Two-Way Analysis of Variance for Speed at Different Day Time and Season

Source	Type III Sum of Squares	DF	Mean Square	F	Sig.
Season	.059	1	.059	.832	.357
Diurnal	.019	1	.019	.297	.562
Season * Diurnal	.021	1	.021	.178	.669
Error	29.119	156	.078		
Total	8129.612	160			
Corrected Total	29.129	159			

The results for the two way analysis of variance indicated a not significant main effect for time of day, *F* (1, 156) = 0.297, *p* > .05 and a not significant main effect for Seasonal variations, *F* (1, 156) = 0.832, *p* > .05. Furthermore, the results shows a not significant interaction between time of day and Seasonal variations, *F* (1, 156) = 0.178, *p* > .05 (glimpse Table 2), demonstrating that there is no interaction effect found between time of day and seasonal variations.

Conclusion

The study of data pertaining to the impact of day time variations and season variations on speed ability of soccer players reveals that speed ability was not significantly affected when measured with the 30m dash test in both time of day and season variation. There were no changes recorded in time of day as well as season variations on speed.

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