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Comparative Analysis of Selected Hematological Variables among University Men Basketball Football and Volleyball Players

KEYWORDS

Mr. Dinesh Parmar

B.P.E.M.P.ED. (P.HD. Reining). Research Scholar, CMJ UNIVERSITY

INTRODUCTION:

Today's world is a world of competition and this is very true to sports and games. In fact it has become prestige issue to win medal at the international level. This has resulted in countries sparing no effort to achieve goals; multimillions are spent on research projects to invent much new techniques and technology to achieve excellence. Blood is a vital connective tissue (Fluid) consisting of fluid portion i.e., plasma in which the formed elements such as Red Blood Corpuscles', white blood corpuscles, and platelets are suspended. Plasma contains 8% of solids, which include proteins (Albumin). Non protein nitrogenous substances (cholesterol and glucose) pigments, salts, enzymes. Hormones, anti-bodies and immune bodies. The scientific study of exercise physiology is becoming increasingly important with the growing realization of the relation of exercise to health. Field and laboratory observations of exercise in human subject are being supplemented with physiology, biochemical and hematology studies on laboratory animals. With the result many of the phenomena associated with acute and chronic exercise can now be explained at cellular and molecular levels.

METHODOLOGY

The purpose of this study was to make a compare the selected hematological variables among university Basketball, Football and volleyball Players in order to achieve the purpose of this study twenty players each from Basketball, football and volleyball players, who played in the interzonal university matches they were selected at randomly. These players had sufficient experience in the game. The subjects were more or less of the same age and their age group is between 18 to 24 years. The following hematological variable were selected to this study

1. Red Blood Corpuscles 2. Hemoglobin

STATISTICAL ANALYSIS:

The data which were collected from the subjects were treated statistically. In order to find out the significant difference among the basketball football and volleyball players in hematological performance, one way analysis of variance (ANOVA) was employed. To find out the paired means significant difference, the scheff's post hoc test was used.

TABLE -1

ONE WAY ANALYSIS OF VARIANCE OF RED BLOOD CORPUSCLES (SCORES IN MILLIONS/CU.MM) AND HEMOGLOBIN OF (SCORES IN GM %) THREE GROUPS

Variables	Volleyball	Basketball	Football	Source of Variance	Sum of Squares	df	Mean Squares	'F' Ratio
Red Blood Corpuscles	4.515	4.88	5.22	Between	2.884	2	1.442	12.155*
				Within	6.762	57	0.118	
Hemoglobin	15.105	15.285	15.875	Between	6.489	2	3.244	5.22*
				Within	35.392	57	0.620	

The table reveals the one way analysis of red blood corpuscles and hemoglobin among basketball, football and volleyball players. The obtained F-ratio was 12.55 and 5.22, the table F-ratio value was 3.15 at 0.05 level of confidence for the degree of freedom 2 to 57. As the obtained F-ratio was higher than the table F-ratio, the study was significant. Among the players in red blood corpuscles and hemoglobin. Scheffe's post-Hoc test was administered to find out the paired means significant difference.

TABLE II

ORDERED SCHEFFE'S POST-HOC TEST ORDERED MEANS AND DIFFERENCE BETWEEN THE MEANS FOR RED BLOOD CORPUSCLES AND HEMOGLOBIN

Variables	Football	Basketball	Volleyball	Mean Difference	Confidence Interval
Red Blood Corpuscles	5.22	4.88	-	0.35*	0.334
	5.22	-	4.69	0.53*	
	-	4.88	4.69	0.19	
Hemoglobin	15.87	15.28	-	0.59	0.76
	15.87	-	15.10	0.77	
	-	15.28	15.10	0.18	

The required scheffe's confidence interval value to be significant at 0.05 level was 0.334 and

Difference among volleyball, basketball and football players was significant as the mean differences were greater than the required confidence interval. Except basketball and football mean difference.

The obtained mean values in red blood corpuscles among university men basketball, football and volleyball players were presented through bar diagram for better understanding of the results. The required scheffe's confidence interval value to be significant at 0.05 level was 0.76 and difference among football and basketball, basketball and volleyball players were significant as the mean differences were greater than the required confidence interval. Except basketball and Volleyball mean difference. The obtained mean values in Hemoglobin among university men basketball, football and

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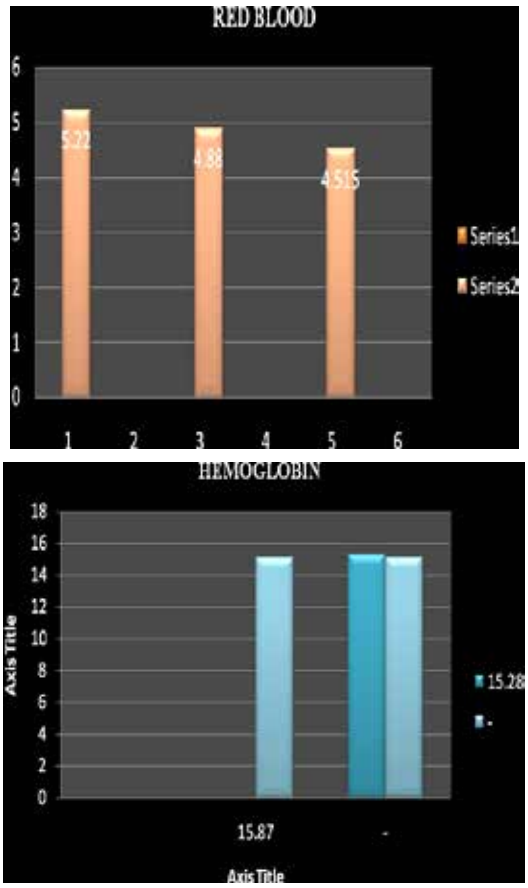
volleyball players were presented through bar diagram for better understanding of the results.

FIGURE-1
BAR DIAGRAM SHOWING THE MEAN DIFFERENCES AMONG THE GROUPS ON RED BLOOD CORPUSCLES (SCORES IN MILLIONS/ CU.MM) AND HAEMOGLOBIN (SCORES IN GM %)



CONCLUSIONS

Within the limitation of the present study, the following conclusions were drawn. It was concluded that football players having high rate of red blood corpuscles than the basketball and volleyball players. It was concluded that football players having more hemoglobin percentage than basketball and volleyball players.

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