



COMPARATIVE STUDY OF HEMOGLOBIN LEVEL OF KABADDI PLAYERS AT DIFFERENT PLAYING POSITION

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ABSTRACT:

The Purpose of the study was to see the difference between hemoglobin levels of kabaddi players at different playing positions. To achieve the purpose of the present study researcher has selected 30 players of different playing position in kabaddi: 10 Raider, 10 Third and 10 Corner from various West Zone Inter University Kabaddi (Men) Tournament 2022-23. Subjects were selected by purposive sampling method. The age of the player were ranged between 20 to 25 years. Estimation of Hemoglobin was done with the help of Sahli's haemoglobinometer. To see the difference between Raider, Third and Corner playing position kabaddi players in reference to level of hemoglobin One Way Analysis of Variance was applied. Result of the study revealed that there was significant difference in different level of hemoglobin of kabaddi players at different playing positions as obtained F-ratio was 5.482 which was higher than that of required tabulated 'F' value of 3.354 at 0.05 level of significance with (2,27) degree of freedom. Since the one-way analysis of variance was found to be significant in related to Hemoglobin, the least significant difference (L.S.D.) was applied to assess the paired means difference among kabaddi players at different playing positions in reference to level of hemoglobin. Post Hoc test revealed that significant difference was found between the means of raider and corner as well as third and corner as the mean difference of above two were greater than the critical differences. Insignificant difference was found between the means of raider and third, as the mean difference was less than the critical difference. The sequence of performance in all three groups was (14.4) raider > (14.2) third > (13.8) corner. Comparison amongst all the three playing positions in reference to hemoglobin level shows significant difference because the calculated 'F' ratio is 5.482 which were greater than tabulated 'F' value. While seeing the mean performance we get that the mean level of hemoglobin of raider (14.4) is significantly better than third (14.2) and corner (13.8). It may be attributed that raider posses a mesomorphic body type have high level of hemoglobin because hemoglobin is the combination of iron and protein present in blood carries oxygen from the respiratory organs to the rest of the body where it releases the oxygen to burn nutrients to provide energy to power the function of the organism. Hemoglobin is mainly depends on the balanced nutrition taken by an individual mesomorphic body type is also termed as athletic body type so athletes always prefer a well balanced diet contains a proper amount of carbohydrate, protein and iron as compared to endomorphic body types.

Keywords: Raider, Third, Corner, Hemoglobin, etc.

INTRODUCTION :

Hemoglobin is a complex compound that contains iron and protein. It plays important role in exercise metabolism. Both hemoglobin and myoglobin requires iron for optimal formation. Hemoglobin transport oxygen throughout the body via the blood and myoglobin carries oxygen in the muscles. About 70% of the iron in the body is involved in oxygen transport and 30% is stored in the form of Ferritin. Low hemoglobin level result in decreased oxygen uptake and delivery of oxygen to body tissues and muscles also decreased. Hemoglobin contains iron also limits the

capacity of the muscles to use oxygen to produce energy and form ATP, thus compromising aerobic metabolism. When anemia develops, exercising muscles receive less oxygen and produce more lactic acid for a given intensity and consequently, fatigue sooner than usual during training. In fact, low hemoglobin level may affect performance of an individual.

In sports, today level of hemoglobin plays a major role. According to research it is apparent that sports is perhaps the only setting in which acts of interpersonal are not tolerated, but enthusiastically applauded by large segment of

society. Professional sports are becoming increasingly more violent. Social psychologists have discerned a number of influences that may be involved. Sports players have scripts for resolving problems with physical action, thus when problem arise, they immediately seek to act, aggressively if necessary. Some people like sports in which they can show direct aggression like boxing, kabaddi, etc where players make contact with each other. Every player's posse's different level of physiological parameters at different level i.e. international, national, varsity etc. likewise every individual may posse's different level of hemoglobin according to their different playing position's in kabaddi game. To see whether there is significant difference or not the researcher has taken study as "comparative study of hemoglobin level of kabaddi players at different playing position".

MATERIALS AND METHODS :

The Purpose of the study was to see the difference between hemoglobin levels of kabaddi players at different playing positions. To achieve the purpose of the present study researcher has selected 30 players of different playing position in kabaddi: 10 Raider, 10 Third and 10 Corner from various West Zone Inter University Kabaddi (Men) Tournament 2022-23. Subjects were selected by purposive sampling method. The age of the player were ranged between 20 to 25 years.

Hemoglobin: Estimation of Hemoglobin was done with the help of Sahli's haemoglobinometer. Hemoglobin is a protein present in RBC (red blood cells) which carries oxygen to the muscles. Player's were asked to sit down on the chair and the index finger of the player was prick with sterile needle and wiped away the first one or two drops of blood with a cotton after formation of good sized drop on the punctured site, dipped the top end of the pipette on the punctured site and drawn blood to the 20 cm mark. Expelled the blood into the tube

containing the HCL solution, mixed the content quickly before any clotting of blood occurs, put the tube back into comparator and waited for at least 10 minute, took out the tube from the comparator and added few drops of distilled water and stirred the contents with stirrer continued to add distilled water drop by drop till the colour of the solution matched the standard and the read the percentage of haemoglobin in gm/100ml of blood.

Statistical Analysis

To see the difference between Raider, Third and Corner playing position kabaddi players in reference to level of hemoglobin One Way Analysis of Variance was applied.

Above table revealed that there was significant difference in different level of hemoglobin of kabaddi players at different playing positions as obtained F-ratio was 5.482 which was higher than that of required tabulated 'F' value of 3.354 at 0.05 level of significance with (2,27) degree of freedom.

Since the one-way analysis of variance was found to be significant in related to Hemoglobin, the least significant difference (L.S.D.) was applied to assess the paired means difference among kabaddi players at different playing positions in reference to level of hemoglobin.

Table-2 clearly revealed that significant difference was found between the means of raider and corner, third and corner as the mean difference of above two were greater than the critical differences.

Insignificant difference was found between the means of raider and third, as the mean difference was less than the critical difference.

The sequence of performance in all three groups was (14.4) raider > (14.2) third > (13.8) corner.

Discussions of Findings:

Comparison amongst all the three playing positions in reference to hemoglobin level shows significant difference because the calculated 'F' ratio is 5.482 which were greater than tabulated

'F' value. While seeing the mean performance we get that the mean level of hemoglobin of raider (14.4) is significantly better than third (14.2) and corner (13.8). It may be attributed that raider posses a mesomorphic body type have high level of hemoglobin because hemoglobin is the combination of iron and protein present in blood carries oxygen from the respiratory organs to the rest of the body where it releases the oxygen to burn nutrients to provide energy to power the function of the organism. Hemoglobin is mainly depends on the balanced nutrition taken by an individual mesomorphic body type is also termed as athletic body type so athletes always prefer a well balanced diet contains a proper amount of carbohydrate, protein and iron as compared to endomorphic body types.

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Table – 1 Comparison of Hemoglobin Level of Kabaddi Players Playing at different position

SV	SS	df	MS	F
Between	21.928	2	10.964	5.482*
Error	54	27	2	

*Significant at 0.05 level

tab 'f' at (2,27) = 3.354

Table-2 Post-Hoc Test

Raider	Third	Corner	M.D.	C.D.
14.4	14.2		0.2	0.245
14.4		13.8	0.6*	0.245
	14.2	13.8	0.4*	0.245

*Significant at .05 levels.

Graph no. 1 Comparison of Hemoglobin Level of Kabaddi Players Playing at different position