
STUDY OF BALANCE AND CO-ORDINATION OF SELECTED GAMES PLAYERS



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ABSTRACT

The main objective of the study was to find out the differences in balance and co-ordination among the Football, Hockey, Handball, and Basketball players. 15 male players from each game, namely football, Hockey, Handball and Basketball players were selected as the subject for this study. The study was delimited to the male players of selected four games namely Football, Hockey, Handball, and Basketball. The average age of the subjects ranging from 18 to 25 years, their minimum status of participation was inter-collegiate level of competition. In Football, Hockey, Handball and Basketball it is vital that the players required well balance in dynamic condition, finer neuro - muscular co-ordination and quick reaction time to execute their excellent skill performance during game successfully. That is why the researcher selected the following variables such as Dynamic balance, Eye-hand co-ordination and Eye-foot co-ordination. Analysis of data: the main objective of the study was to find out the balance and co-ordination of football, hockey, handball and basketball players and to compare it. One way analysis of variance (F-ratio) was computed in order to determine the differences in the balance and co-ordination of the four groups viz, football, hockey, handball and basketball players. While F-ratio shown the significant difference, L.S.D. Post-Hoc-Test was employed to determine the paired mean difference.

Keywords: Balance, Dynamic Balance, Co-ordination, Eye-hand co-ordination, Eye-foot co-ordination & selected Game Players.

INTRODUCTION

In the recent world cup football, the game of football was said to be of very high standard. The game of football has reached to its higher level of skills. If we compare the footballer of India, with Europe and other countries then we can find that Indian players are not that much agile and not having the reaction time like the European and other Latin American players. So, Football (soccer) is the most popular sports in the world at present. Too many people too many countries, too many teams play it and of course too many people watch it. It is

apparently one of the ancient sports. Football is known as the king of sports. Mainly because it is the game, which is played in one form or the other in all the nations of the world, soccer is the most popular term of association football.

The hockey players are equipped with heavy padding and hockey stick in one hand make him somewhat rigid asset in the goal. Size of the ball is smaller as compared to handball and football. Therefore fast prerequisite of the hockey players is that the hockey players should have the sharp vision supported by the reaction time and agility. As the hockey ball is heavier and smaller.

Handball is one of the fastest games. It is the game played by the seven players in short field, passing and running in this game as made it faster. The handball player's skill is also more difficult, Handball is also dominated by the fall players and fast attacking on body. So the handball players remain busy very time. As the width of the field area is less in the handball as compared to Football and hockey area. So the handball players should have quick reflexes and more reaction time.

Basketball is a game, which consists of strenuous, vigorous, intense and continuous thrilling action and therefore, appeals to all energetic youths. It involves various skills like dribbling, passing and shooting, intercepting, rebounding and so on.

“Co-ordination is the ability to integrate muscles movements into an efficient pattern of movement”. Co-ordination makes the difference between good performance and poor performance. The efficiency of skill patterns depends upon the interrelation of speed, agility, balance, and muscle movement to be performed and see the relationship of each movement to the total pattern. The child must understand the movement to be performed and see the relationship of each movement to the total pattern. Development of kinaesthetic perception usually allows movements to become rhythmical and efficient.

Men's existence and effectiveness depend upon his muscle from the time we wake up from the bed every action is the result of changing muscular contraction due to motor act. The evolution of man shows that he has developed himself from a lower form of life to what it is today. It was the muscular system with its connecting nerves that is developed first before many of the other system of the body. The power of contraction of a muscle depends upon the stimulus caused by the corresponding nerve fibers of the nervous system. For any type of work co-ordination is very important. If the organs of the body are week then the neuro-muscular co-ordination would be affected. This neuro-muscular co-ordination is very important for any physical activities. The neuro-muscular co-ordination of the individual which includes his ability to learn new skilled and finally achieve competency in physical activities is essential to all phases of physical education.

Reaction time is the taken to process information and to initiate a movement after receiving a stimulus. As present many researchers have directed their attention towards the study of reaction time and its role on the performance level of the players in various games. Because

among the traits of motor ability and performance of athlete and trainers, speed of reaction and movement time is most important traits. These traits are measured and considered by the coaches and the experts with keen interest.

Different games required different body position of balance, finer co-ordination and quick reaction time to execute any skill successfully. The game of football, hockey, handball and basketball players are necessary of the entire mention variable as to have well control and to give pass or short at the target successfully. Hence the researcher is intended to undertake this study.

OBJECTIVE OF THE STUDY

The main objective of the study was to find out the differences in balance and co-ordination among the Football, Hockey, Handball, and Basketball players.

HYPOTHESIS

It was hypothesized that there may be significant differences in body balance and co-ordination among the players of selected four games.

DESIGN OF THE STUDY

15 male players from each game, namely football, Hockey, Handball and Basketball players were selected as the subject for this study. The average age of the subjects ranging from 18 to 25 years, their minimum status of participation was inter-collegiate level of competition. In Football, Hockey, Handball and Basketball it is vital that the players required well balance in dynamic condition, finer neuro-muscular co-ordination and quick reaction time to execute their excellent skill performance during game successfully. That is why the researcher selected the following variables such as Dynamic balance, Eye-hand co-ordination and Eye-foot co-ordination.

ANALYSIS OF DATA

The main objective of the study was to find out the balance and co-ordination of football, hockey, handball and basketball players and to compare it. One way analysis of variance (F-ratio) was computed in order to determine the differences in the balance and co-ordination of the four groups viz, football, hockey, handball and basketball players. While F-ratio shown the significant difference, L.S.D. Post-Hoc-Test was employed to determine the paired mean difference.

Level of significance: To test the hypothesis, the level of significance was set a 0.05 level of confidence which was considered adequate for the purpose of this study. While using the one way analysis of variance, a value of 2.772 was needed for being significant at 0.05 level of confidence for F (3,56) of freedom.

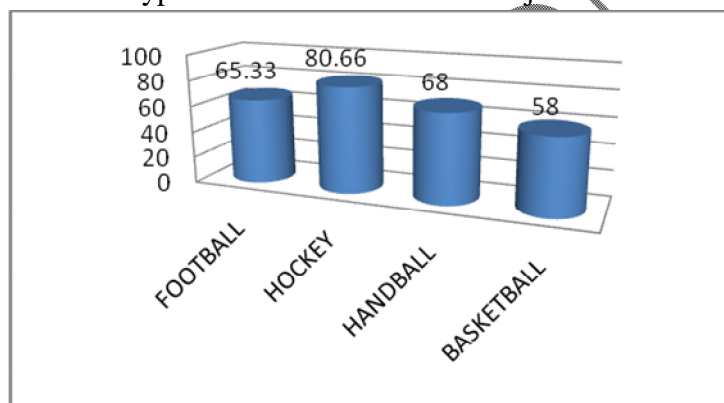
FINDINGS OF THE STUDY

The data collected from 15 subjects each of football, hockey, handball, and basketball players on balance and co-ordination was computed by using one way analysis of variance (F-ratio) statistical technique. The result pertaining to these have been presented in the table below.

Table No: I
One way analysis of variance for the data on Dynamic Balance for four groups viz, Football, Hockey, Handball and Basketball Players

Sources of variance	df	SS	MSS	Obtained F	Required F at 0.05 level
Between Group	3	4013.334	1337.778	1.7391	2.772
Within Group	56	43076.666	769.226		

Table I, reveals that the calculated F-value of 1.7391 is less than that of required F value of 2.772 to be significant at 0.05 level of confidence, hence there was no significance among the means of four selected groups in dynamic balance. In the beginning of this study it was hypothesized that there may be significant differences among the means of selected four groups but the finding of the statistical technique shown that there was no significant difference among the means. Hence the hypothesis stated earlier was rejected.



Graph No. I: Different Between the Means on Dynamic Balance

Table No: II
One way analysis of variance for the data on Eye-hand Co-ordination for four groups viz, Football, Hockey, Handball and Basketball Players

Sources of variance	df	SS	MSS	Obtained F	Required F at 0.05 level
Between Group	3	235.25	78.4167	11.75*	2.772
Within Group	56	373.73	6.6738		

Table I, reveals that the calculated F-value of 11.75 is greater than that of required F value of 2.772 to be significant at 0.05 level of confidence, hence there would be significance among the means of four selected groups in eye-hand co-ordination. In the beginning of this study it was hypothesized that there would be significant differences among the means of

selected four groups but the finding of the statistical technique shown that there would be significant difference among the means. Hence the hypothesis stated earlier was accepted.

Table No: III

Difference between the paired means of Eye-hand Co-ordination of four group's viz. Football, Hockey, Handball and Basketball Players

Football	Hockey	Handball	Basketball	M.D.	C.D.
34.67	35.13			0.46	1.889
34.67		36.07		1.4	1.889
34.67			30.87	3.8*	1.889
	35.13	36.07		.94	1.889
	35.13		30.87	4.26*	1.889
		36.07	30.87	6.2*	1.889

Level of significance at 0.05 level

= 3.56

Observed difference between football and hockey =0.46

Observed difference between football and handball =1.4

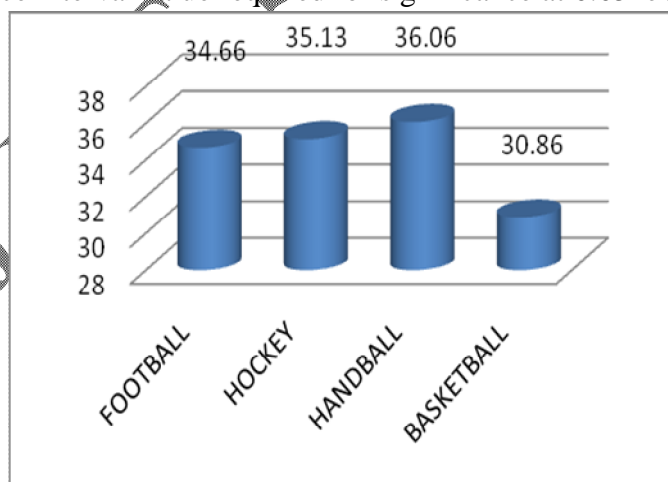
Observed difference between football and basketball =3.8

Observed difference between hockey and handball =0.94

Observed difference between hockey and basketball =4.26

Observed difference between handball and basketball =6.2

Table – III shows significant difference between the means on eye-hand co-ordination of football and basketball is 3.8, hockey and basketball is 4.26, handball and basketball is 6.2 where as the confidence interval value required for significance at 0.05 level is 1.889

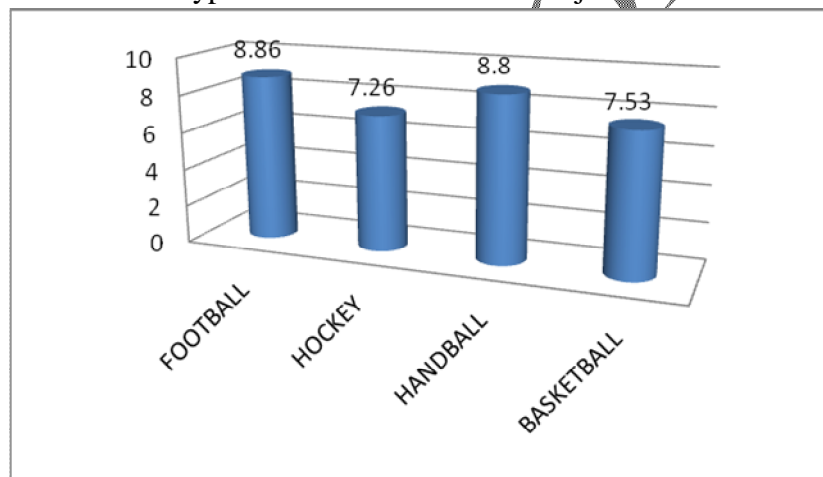


Graph no. II: Difference between the means on eye-hand co-ordination

Table No: IV
One way analysis of variance for the data on eye-foot co-ordination for four groups viz, Football, Hockey, Handball and Basketball Players

Sources of variance	df	SS	MSS	Obtained F	Required F at 0.05 level
Between Group	3	31.3827	10.460	2.432	2.772
Within Group	56	240.800	4.3		

Table I reveals that the calculated F-value of 2.432 is less than that of required F value of 2.772 to be significant at 0.05 level of confidence, hence there was no significance among the means of four selected groups in eye-foot co-ordination. In the beginning of this study it was hypothesized that there may be significant differences among the means of selected four groups but the finding of the statistical technique shown that there was no significant difference among the means. Hence the hypothesis stated earlier was rejected.



Graph no.III: Difference between the means on eye-foot co-ordination

DISCUSSION OF FINDING

The finding of table no. I and II revealed that there were no significance difference among the means of football, hockey, handball, and basketball group in the variables of dynamic balance, and eye-hand coordination. It may be because all the selected four games required well dynamic balance and eye-hand coordination. To play football, hockey, handball, and basketball players has to maintain his body balance while running, jumping or diving changing his movement pattern, to defeat the opponent. The nature of all these four games are same, hence differences are not shown significant. In the eye-hand co-ordination are not significance differences among the means of football, hockey, handball, and basketball players. It may be because of the nature of all these four game are same. Hence differences are not shown

significant. For finding of table no. III revealed that there would be significance difference among the means of football, hockey, handball, and basketball group in the variables of eye-foot co-ordination. It also may be because all the selected four game require separately eye-foot co-ordination. Hockey players shown superior performance in eye-foot co-ordination compare to basketball, football and handball players. Basketball players were superior performance the football and handball players likewise footballers are superior performance the handball players.

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