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Comparison of Eye-Hand Coordination among Cricket, Hockey and Volleyball Players

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Abstract:

The main objective of the study was to compare the eye hand co-ordination among Cricket, Hockey and Volleyball players. It was hypothesized that there would be significant difference among the Cricket, Hockey and Volleyball players in eye-hand co-ordination. The study was delimited to the Cricket, Hockey and Volleyball players of Degree College of Physical Education, Amravati who took part in inter collegiate tournaments of S.G.B. Amravati University. The study was further delimited to male players only. 15-15-15 subjects were selected from games namely Cricket, Hockey and Volleyball. The age of the subject was ranging from 18 to 28 years. The study also delimited to eye-hand co-ordination only. The data pertaining to the study were collected on the players of Degree College of Physical Education, Amravati, 15 male players from each games namely Cricket, Hockey and Volleyball were selected as the subjects for this study. Simple random sampling procedure was adopted for the selection of players The criterion measures Coordination was measured by using Eye-Hand Coordination test and the score was recorded in seconds. To find out the significant difference in the means of Cricket, Hockey and Volleyball groups 'F'-test was employed. To find out the significance difference, level of significance was set at 0.05 level. Eye-Hand co-ordination differs significantly among the players of three selected team games namely Cricket, Hockey and Volleyball, because the calculated F value of 3.642 is higher than of tabulated F valued of 3.23 at 0.05 level. The findings of Table-II reveals that the mean of Eye-Hand Co-ordination significantly differs in between Cricket and Hockey (MD = 0.742) and Cricket and Volleyball players (MD = 0.616) as the obtained mean difference are higher than the critical difference. The findings of the study revealed that there were significant mean difference in Eye-Hand co-ordination among the Cricket, Hockey and Volleyball.

Keywords: Eye-Hand Coordination, Cricket, Hockey and Volleyball

Introduction:

Co-ordination is the ability to integrate muscles movements into an efficient pattern of movement. Co-ordination make the difference between good performance and poor performance. The efficiency of skill patterns depends upon the interrelation of speed, agility, balance and muscle movements into as well coordinated pattern. The neuro-muscular co-ordination of the individual which includes his ability to learn new skill and finally achieve competency in physical activities as essential to all phases of physical education. It is the good advice to the performer and is necessary for judging such variables factor as speed, distance, direction, and size. Countless skills involve co-ordination of the eyes with hands. The players in Cricket, Hockey and Volleyball do require eye-hand co-ordination when they exhibit their skills for successful performance. As there is lack of research available on importance of eye-hand co-ordination for games. Where accuracy is more needed, the research worker was interested to conduct the study on Cricket, Hockey and Volleyball players.

Objectives of the Study

The main objective of the study was to compare the eye hand co-ordination among Cricket, Hockey and Volleyball players.

Hypothesis

It was hypothesized that there would be significant difference among the Cricket, Hockey and Volleyball players in eye-hand co-ordination.

Delimitations

- i) The study was delimited to the Cricket, Hockey and Volleyball players of Degree College of Physical Education, Amravati who took part in inter collegiate tournaments of S.G.B. Amravati University.
- ii) The study was further delimited to male players only.
- iii) 15-15 subjects were selected from games namely Cricket, Hockey and Volleyball.
- iv) The age of the subject was ranging from 18 to 28 years.
- v) The study also delimited to eye-hand co-ordination only.

Methodology

The data pertaining to the study were collected on the players of Degree College of Physical Education, Amravati, 15 male players from each game namely Cricket, Hockey and Volleyball were selected as the subjects for this study. Simple random sampling procedure was adopted for the selection of players the criterion measures Coordination was measured by using Eye-Hand Coordination test and the score was recorded in seconds.

Statistical Analysis:

The researcher collected the necessary data in the specified scoring tables. To find out the significant difference in the means of Cricket, Hockey and Volleyball groups 'F'-test was employed. To find out the significance difference, level of significance was set at 0.05 level. Findings of the statistical analysis have been shown in the following table.

Table I – One Way Analysis of Variance for the Data on Eye-Hand Coordination among the Cricket, Hockey and Volleyball Players

Sources of Variance	Degree of Freedom	Sum of Square	Mean sum of Square	F-ratio
Between Group	2	4.576	2.288	3.642*
Within Group	42	23.386	0.628	

*Significant at 0.05 level

Tabulated $F_{0.05(2, 42)} = 3.23$

An analysis of Table-I reveals that Eye-Hand co-ordination differs significantly among the players of three selected team games namely Cricket, Hockey and Volleyball, because the calculated F value of 3.642 is higher than of tabulated F valued of 3.23 at 0.05 level. Since the F-test was found to be significant through one way analysis of variance, the LSD Post Hoc Test was adopted to assess the paired mean difference between the groups for Eye-Hand Co-ordination, the difference are shown in Table-II.

Table II– Difference Between the Paired Means of Eye-Hand Co-ordination among the Players of Cricket, Hockey and Volleyball

Mean of			Mean Difference	Critical Difference
Cricket	Hockey	Volleyball		
16.827		17.551	0.724*	0.584
16.827	16.935		0.108	0.584
	16.935	17.551	0.616*	0.584

* Significant at 0.05 level

The findings of Table-II reveals that the mean of Eye-Hand Co-ordination significantly differs in between Cricket and Hockey (MD = 0.742) and Cricket and Volleyball players (MD = 0.616) as the obtained mean difference values are higher than the critical difference value of 0.65 at 0.05 level of confidence. It is also learnt from the above table that the mean difference for Cricket and Hockey players (MD = 0.108) is less than the critical difference value of 0.65, hence the mean difference is not statistically significant. The mean difference is picturesquely shown in fig.1.

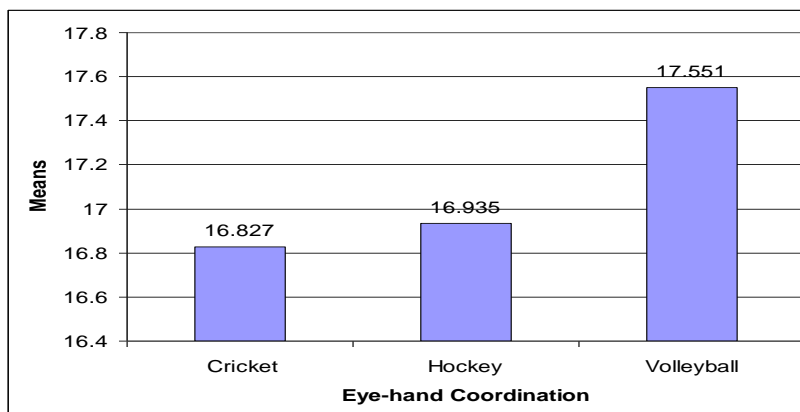


Figure 1

Showing Paired Means Difference of Eye-Hand Co-ordination among the Players of Cricket, Hockey and Volleyball

Findings:

The findings of the study revealed that there were significant mean difference in Eye-Hand co-ordination among the Cricket, Hockey and Volleyball. It may be due to the nature of games as Volleyball is played within small area by using hands whereas Cricket also played by hands, but in a big area where a batsman plays against 11 players. The result also showed significant difference in Eye-Hand co-ordination among Hockey and Volleyball players. In Volleyball it is to be ensure that Volleyball does not touch the ground but Hockey is played by biting the ball with sticks all along the ground. The result also showed in significant difference in Eye-Hand Co-ordination among Cricket and Hockey players.

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