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## Analysis of predominance of selected motor fitness components and Physiological variables of men Volleyball players

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### Abstract

The purpose of the study was to find out the Analysis of predominance of selected motor fitness components and physiological variables of men volleyball players. To achieve this purpose of the study, thirty men students of Department of Physical Education, Sri A.V.V.M Pushpam College, Poondi, Tamil Nadu, India were tested. The age of the subjects were ranged from 18 to 24 years. The selected subjects were divided into two equal groups of fifteen subjects each, such as Experimental Group and control group. The group I Experimental Group conducted test for three days per week for eight weeks and group II acted as control. Who did not underwent any special training programme apart from their regular day today physical education curriculum. The following variables speed and vital capacity were selected as criterion variables for this study. The researcher had discussed with the experts, physical education professionals and had reviewed the various literatures and then selected the following test items, which were standardized, ideal apt test for the selected criterion variables. Speed and vital capacity were assessed by 50 meters dash with wet spirometer respectively. All the subjects of two groups were tested on selected criterion variables at prior to and immediately after the training programme as test selection. Analysis of covariance (ANCOVA) was used to find out the significant difference if any, among the groups on each selected criterion variables separately. In all the cases .05 level of confidence was fixed to test the significance, which was considered as appropriate. The results of the study revealed that there was a significant difference between progressive Experimental Group and control group on selected criterion variables such as speed and vital capacity.

**Keywords:** Motor Fitness Components, Physiological Variables, Volleyball Players

### 1. Introduction

This study will investigate new scientific approach for boosting up performance of Volleyball players. Therefore, the research scholar have taken this comparative study of motor performance level among categorized skilled volleyball players to know the contribution of motor fitness to achieve excellence in volleyball performance. This section deals with complete methods applied for the selection of subjects, selection of variables, categorization of volleyball player groups, administration of tests and collection of data and statistical procedures employed for data analysis.

### Methodology

The purpose of the study was to find out the Analysis of predominance of selected motor fitness components and physiological variables of men volleyball players. To achieve this purpose of the study, thirty men students of Department of Physical Education, Sri A.V.V.M Pushpam College, Poondi, Tamil Nadu, India were tested. The age of the subjects were ranged from 18 to 24 years. The selected subjects were divided into two equal groups of fifteen subjects each, such as Experimental Group and control group. The group I Experimental Group conducted test for three days per week for eight weeks and group II acted as control. Who did not underwent any special training programme apart from their regular day today physical education curriculum. The following variables speed and vital capacity were selected as criterion variables for this study. The researcher had discussed with the experts, physical education professionals and had reviewed the various literatures and then selected the following test items, which were standardized, ideal apt test for the selected criterion variables. Speed and vital capacity were assessed by 50 meters dash with wet spirometer respectively.

All the subjects of two groups were tested on selected criterion variables at prior to and immediately after the training programme as test selection. Analysis of covariance (ANCOVA) was used to find out the significant difference if any, among the groups on each selected criterion variables separately. In all the cases .05 level of confidence was fixed to test the significance, which was considered as appropriate.

**Training Programme**

Experimental group (group-I) Experimental Group conducted test for three days per week for eight weeks in addition to their regular physical activities. Every day the workout lasted for about 30-45 minutes including warming up and cooling down workouts. Control group did not participate in any specific training. However, they performed regular physical education activities as for their curriculum.

**Statistical Analysis**

The data collected on selected criterion variables prior to and immediately after the training programme as pre and post test respectively. The analysis of covariance (ANCOVA) was used to find out the significant differences if any among the groups on selected criterion variables separately. Since two group were involved whenever the “F “ ratio for adjusted post test mean was found to be significant obtained the analysis of covariance was tested at .05 level of confidence which was considered appropriate.

**Speed**

The analysis of covariance for the pre and post test data on speed of experimental group and control group were analysed and are presented in Table I.

**Table II:** Analysis of Covariance of the Data on Speed of Pre and Post Test Scores of Experimental Group and Control Group

Test	Experimental Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained “F” ratio
Pre Test Mean	8.33	8.34	Between	0.3	1	0.3	0.412
S.D	0.057	0.056	Within	20.4	28	0.729	
Post Test Mean	7.96	8.33	Between	17.63	2	17.63	21.396*
S.D	0.061	0.056	Within	23.07	28	0.824	
Adjusted Post Test	7.59	8.34	Between	22.11	1	22.11	127.73*
			Within	3.46	27	0.128	

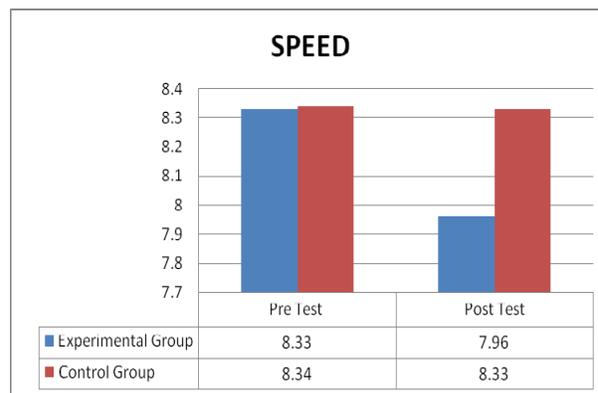
\*significant at .05 level of confidence

(The table values required for significance at .05 level of confidence for 1 and 28 and 1 and 27 are 4.20 and 4.415 respectively)

The table I shows that the pre-test mean values on speed of experimental group and control group are 8.33 and 8.34 respectively. The obtained “F” ration of 0.412 for pre-test scores is less than the table value of 3.34 for df 1 and 28 required for significance at .05 level of confidence of speed. The post test mean values of speed of experimental group and control group are 7.96 and 8.33 respectively. The obtained “F” ratio of 21.396 for post test scores id more than the table value 3.34 for df 1 and 28 required for significance at .05 level of confidence on speed.

The adjusted post-test means of experimental group and control group on speed are 7.89 and 8.34 respectively. The obtained “F” ratio of 127.73 for adjusted post-test means is more than the required table value of 4.215 for df 2 and 27 for significance at .05 level of confidence on speed.

The results of the study indicated that there was a significant difference between the adjusted post-test means of experimental group and control group on speed.



**Fig I:** Analysis Of Variance of the Pre and Post Test Values of Experimental Group on Speed

**Vital Capacity**

The analysis of covariance for the pre and post test data on vital capacity of experimental group and control group were analysed and are presented in Table II.

**Table II:** Analysis of Covariance of the Data on Vital Capacity of Pre and Post Tests Scores of Experimental Group and Control Group

Test	Experimental Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained “F” ratio
Pre Test Mean	2547.32	2564.13	Between	36.85	1	36.85	0.01
S.D	61.92	62.24	Within	107600	28	3842.86	
Post Test Mean	2899.35	2578.69	Between	696257	2	696257	151.46*
S.D	83.64	59.28	Within	128715.6	28	4596.99	
Adjusted Post Test	2735.64	2569.58	Between	801204.3	1	801609.1	205.59*
			Within	105275.3	27	3899.09	

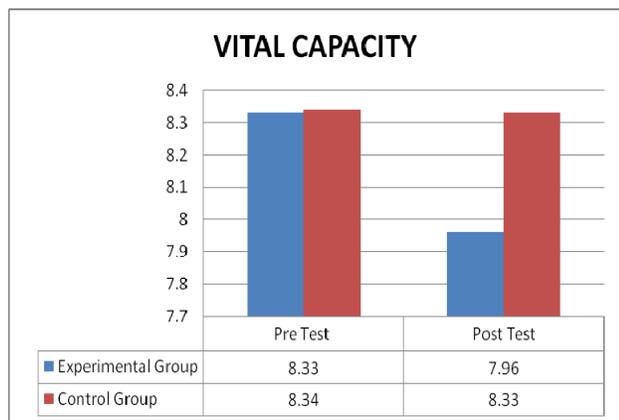
\*significant at .05 level of confidence

(The table values required for significance at .05 level of confidence for 1 and 28 and 1 and 27 are 4.20 and 4.215 respectively)

The table II shows that the adjusted post-test means experimental group and control group on vital capacity were 2735.64 and 2569.58 respectively. The obtained “F” ratio of 205.59 for adjusted post-test means is more than the required table value of 4.215 for df 1 and 27 for significance at .05 level of confidence on vital capacity.

The adjusted post-test means of experimental group and control group on vital capacity are 2735.64 and 2569.58 respectively. The obtained “F” ratio of 205.59 for adjusted post-test means is more than the required table value of 4.215 for df 2 and 27 for significance at .05 level of confidence on vital capacity.

The results of the study indicated that there was a significant difference between the adjusted post-test means of experimental group and control group on vital capacity.



**Fig II:** Analysis Of Variance of the Pre and Post Test Values of Experimental Group on Vital Capacity

**Conclusion**

Based on the study, the following conclusions were drawn.

1. There was significant difference between experimental training group and control group on speed.
2. There was a significant difference between progressive weight training group and control group on vital capacity.
3. And all so it was found that was a significant improvement on selected criterion variables such as speed and vital capacity.

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