

CHAPTER IV

RESULTS AND DISCUSSIONS

4.1 ANALYSIS OF THE DATA

The chapter deals with the analysis of data collection from samples of four groups namely, asanas, aerobics, proprioceptive training and control groups were analyzed on selected selected motor fitness, physiological and performance variables such as speed, explosive power, agility, reaction time, vital capacity, resting pulse rate, cardio vascular endurance, breath holding time, dribbling ability, passing ability and shooting ability among football players.

The subjects for this study were selected at random but the groups were not equated in relation to the factors that have been examined. Hence, the difference among the means of the four groups in the pre-test had to be into account during the analysis of the post test difference among the means. This was achieved the application of analysis of covariance (ANCOVA) where the find means were adjusted for difference in the initial means were tested for significance. When the adjusted post test means were significant, the scheffe's post hoc test was administered to final out the paired means significant difference.

4.2 TEST OF SIGNIFICANCE

This is the crucial portion of the discussion in arriving at the conclusion by examining the hypothesis. The procedure of testing the hypothesis is in accordance with the result obtained in relation the level of confidence, which was fixed at .05 level and considered necessary for this study. These tests are usually called the test of significance.

4.3 COMPUTATION OF ANALYSIS OF COVARIANCE AND POST HOC TEST.

The following tables illustrate the statistical results of effects due to different packages of training on selected motor fitness, physiological and performance variables among football players.

4.3.1 SPEED

The analysis of covariance on speed of the pre and post test scores of asanas, aerobics and proprioceptive training and control groups have been analyzed and presented in Table III.

Table – III

COMPUTATION OF ANALYSIS OF CO-VARIANCE OF PRE TEST, POSTTEST AND ADJUSTED POST TEST ON SPEED OF DIFFERENT EXPERIMENTAL AND CONTROL GROUPS

Test	Asanas group	Aerobic group	Proprioceptive training group	Control group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test									
Mean	7.44	7.51	7.58	7.53	Between	0.15	3	0.050	1.24
S.D.	0.18	0.25	0.25	0.25	Within	3.08	7 6	0.041	
Post Test									
Mean	7.30	7.27	7.43	7.51	Between	0.57	3	0.190	8.96*
S.D.	0.17	0.08	0.16	0.23	Within	1.62	7 6	0.021	
Adjusted Post Test									
Mean	7.35	7.27	7.39	7.50	Between	0.40	3	0.135	27.47*
					Within	0.37	7 5	0.005	

The table values required for significance at .05 level of confidence for 3 and 76 and 3 and 75 are 2.728 and 2.73 respectively).

The table III shows that the pre-test mean values on speed of asanas, aerobic, proprioceptive training and control groups were 7.44, 7.51, 7.58 and 7.53 respectively. The obtained 'F' ratio of 1.24 for pre-test scores was less than the table value of 2.728 for df 3 and 76 required for significance at .05 level of confidence on speed. The post-test mean values on speed of asanas, aerobic, proprioceptive training and control groups were 7.30, 7.27, 7.43 and 7.51 respectively. The obtained "F" ratio of 8.96 for post-test scores was higher than the table value of 2.728 for df 3 and 76 required for significance at .05 level of confidence on speed.

The adjusted post-test means on speed of asanas, aerobic, proprioceptive training and control groups were 7.35, 7.27, 7.39 and 7.51 respectively. The obtained "F" ratio of 27.47 for adjusted post-test means was higher than the table value of 2.73 for df 3 and 75 required 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 asanas, aerobic, proprioceptive training and control groups on speed.

Since, four groups were compared, whenever the obtained 'F' ratio for adjusted post test was found to be significant, the Scheffe's test to find out the paired mean differences and it was presented in Table IV.

Table - IV
THE ORDERED SCHEFFE'S TEST FOR THE DIFFERENCES BETWEEN
PAIRED MEANS ON SPEED

Asanas group	Aerobic group	Proprioceptive training group	Control group	Mean Differences	Confidence Interval Value
7.35	7.27	-	-	0.08	0.09
7.35	-	7.39	-	0.04	0.09
7.35	-	-	7.50	0.15*	0.09
-	7.27	7.39	-	0.12*	0.09
-	7.27	-	7.50	0.23*	0.09
		7.39	7.50	0.11*	0.09

* Significant at .05 level of confidence.

The table IV shows that the mean difference values between asanas group and control group, aerobic group and proprioceptive training group, aerobic group and control group, proprioceptive training group and control group 0.15, 0.12, 0.23 and 0.11 respectively on speed which were greater than required confidence interval value 0.09 at .05 level of confidence. Hence, the above comparisons were significant and also the table shows that the mean difference values between asanas group and aerobic group and asanas group and proprioceptive training group 0.08 and 0.04 respectively on speed which were lesser than required confidence interval value 0.09 at .05 level of confidence. Hence, the above comparisons were not significant. The adjusted post-test mean values of asanas, aerobic, proprioceptive training and control groups on speed were graphically represented in figure 4.

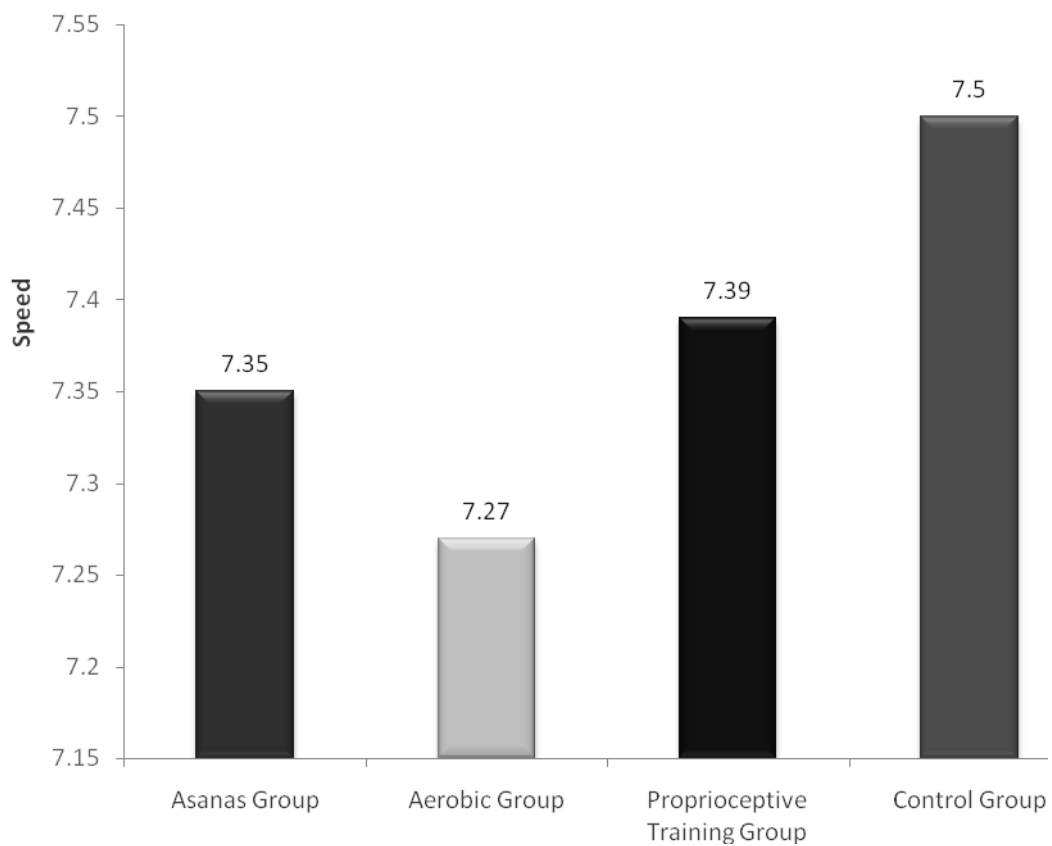


FIGURE 4: THE ADJUSTED POST-TEST MEAN VALUES OF ASANAS, AEROBIC, PROPRIOCEPTIVE TRAINING AND CONTROL GROUPS ON SPEED

4.3.2 EXPLOSIVE POWER

The analysis of covariance on explosive power of the pre and post test scores of asanas, aerobic, proprioceptive training and control groups have been analyzed and presented in Table V.

Table – V

COMPUTATION OF ANALYSIS OF CO-VARIANCE OF PRE TEST, POST TEST AND ADJUSTED POST TEST ON EXPLOSIVE POWER OF DIFFERENT EXPERIMENTAL AND CONTROL GROUPS

Test	Asanas group	Aerobic group	Proprioceptive training group	Control group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test									
Mean	37.80	38.07	37.67	38.00	Between	1.52	3	0.51	1.34
S.D.	0.68	0.70	0.72	0.76	Within	28.67	76	0.38	
Post Test									
Mean	39.87	45.87	41.67	38.27	Between	482.85	3	160.95	385.47*
S.D.	0.64	0.99	0.62	0.70	Within	31.73	76	0.42	
Adjusted Post Test									
Mean	39.91	45.77	41.78	38.21	Between	473.37	3	157.79	496.93*
					Within	23.81	75	0.32	

(The table values required for significance at .05 level of confidence for 3 and 76 and 3 and 75 are 2.728 and 2.73 respectively).

The table V shows that the pre-test mean values on explosive power of asanas, aerobic, proprioceptive training and control groups were 37.80, 38.07, 37.67 and 38.00 respectively. The obtained 'F' ratio of 1.34 for pre-test scores is less than the table value of 2.728 for df 3 and 76 required for significance at .05 level of confidence on explosive power. The post-test mean values on explosive power of asanas, aerobic, proprioceptive training and control groups 39.87, 45.87, 41.67 and 38.27 respectively. The obtained "F" ratio of 385.47 for post-test scores was higher than the table value of 2.728 for df 3 and 76 required for significance at .05 level of confidence on explosive power.

The adjusted post-test means on explosive power of asanas, aerobic, proprioceptive training and control groups were 39.91, 45.77, 41.78 and 38.21 respectively. The obtained "F" ratio of 496.93 for adjusted post-test means was higher than the table value of 2.73 for df 3 and 75 required for significance at .05 level of confidence on explosive power.

The results of the study indicated that there was a significant difference between the adjusted post-test means of asanas, aerobic, proprioceptive training and control groups on explosive power.

Since, four groups were compared, whenever the obtained 'F' ratio for adjusted post test was found to be significant, the Scheffe's test to find out the paired mean differences and it was presented in Table VI.

Table - VI
THE ORDERED SCHEFFE'S TEST FOR THE DIFFERENCES BETWEEN
PAIRED MEANS ON EXPLOSIVE POWER

Asanas group	Aerobic group	Proprioceptive training group	Control group	Mean Differences	Confidence Interval Value
39.91	45.77	-	-	5.86*	0.73
39.91	-	41.78	-	1.87*	0.73
39.91	-	-	38.21	1.71*	0.73
-	45.77	41.78	-	3.99*	0.73
-	45.77	-	38.21	7.56*	0.73
-	-	41.78	38.21	3.58*	0.73

* Significant at .05 level of confidence.

The table VI shows that the mean difference values between asanas group and aerobic group, asanas group and proprioceptive training group, asanas group and control group, aerobic group and proprioceptive training group, aerobic group and control group, proprioceptive training group and control group 5.86, 1.87, 1.71, 3.99, 7.56 and 3.58 respectively on explosive power which were greater than required confidence interval value 0.73 at .05 level of confidence. Hence, the above comparisons were significant.

The adjusted post-test mean values of asanas, aerobic, proprioceptive training and control groups on explosive power were graphically represented in figure 5.

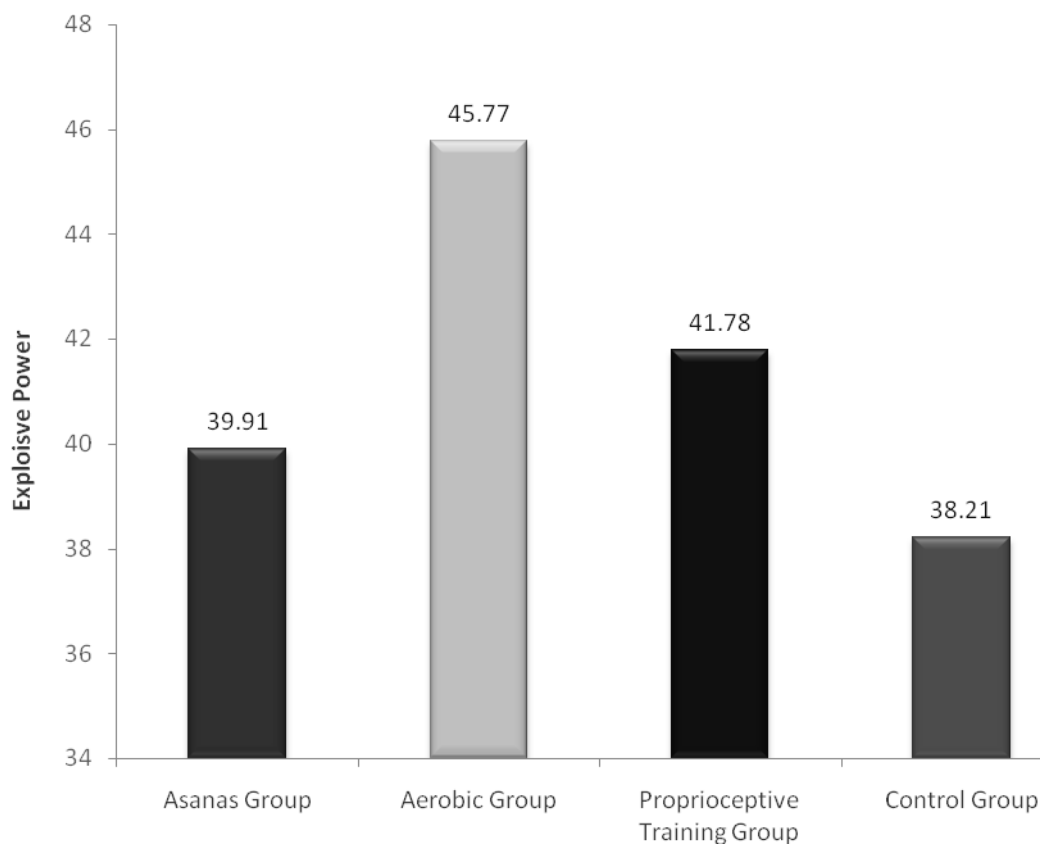


FIGURE 5: THE ADJUSTED POST-TEST MEAN VALUES OF ASANAS, AEROBIC, PROPRIOCEPTIVE TRAINING AND CONTROL GROUPS ON EXPLOSIVE POWER

4.3.3 AGILITY

The analysis of covariance on agility of the pre and post test scores of asanas, aerobic, proprioceptive training and control groups have been analyzed and presented in Table VII.

Table –VII

COMPUTATION OF ANALYSIS OF CO-VARIANCE OF PRE TEST, POST TEST AND ADJUSTED POST TEST ON AGILITY OF DIFFERENT EXPERIMENTAL AND CONTROL GROUPS

Test	Asanas Group	Aerobic group	Proprioceptive training group	Control group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test									
Mean	6.82	6.85	6.87	6.84	Between	0.02	3	0.0056	1.20
S.D.	0.07	0.06	0.11	0.06	Within	0.35	76	0.0046	
Post Test									
Mean	6.76	6.59	6.75	6.83	Between	0.47	3	0.1553	26.83*
S.D.	0.08	0.06	0.12	0.08	Within	0.44	76	0.0058	
Adjusted Post Test									
Mean	6.78	6.58	6.72	6.83	Between	0.51	3	0.1697	96.44*
					Within	0.13	75	0.0018	

*Significant at .05 level of confidence

(The table values required for significance at .05 level of confidence for 3 and 76 and 3 and 75 are 2.728 and 2.73 respectively).

The table VII shows that the pre-test mean values on agility of asanas, aerobic, proprioceptive training and control groups were 6.82, 6.85, 6.87 and 6.84 respectively. The obtained 'F' ratio of 1.20 for pre-test scores is greater than the table value of 2.728 for df 3 and 76 required for significance at .05 level of confidence on agility. The post-test mean values on agility of asanas, aerobic, proprioceptive training and control groups were 6.76, 6.59, 6.75 and 6.83 respectively. The obtained "F" ratio of 26.83 for post-test scores was more than the table value of 2.723 for df 3 and 76 required for significance at .05 level of confidence on agility.

The adjusted post-test means on agility of asanas, aerobic, proprioceptive training and control groups were 6.78, 6.58, 6.72 and 6.83 respectively. The obtained "F" ratio of 96.44 for adjusted post-test means was higher than the table value of 2.73 for df 3 and 75 required for significance at .05 level of confidence on agility.

The results of the study indicated that there was a significant difference between the adjusted post-test means of asanas, aerobic, proprioceptive training and control groups on agility.

Since, four groups were compared, whenever the obtained 'F' ratio for adjusted post test was found to be significant, the Scheffe's test to find out the paired mean differences and it was presented in Table VIII.

Table - VIII
THE ORDERED SCHEFFE'S TEST FOR THE DIFFERENCES BETWEEN
PAIRED MEANS ON AGILITY

Asanas group	Aerobic group	Proprioceptive training group	Control group	Mean Differences	Confidence Interval Value
6.78	6.58	-	-	0.20*	0.05
6.78	-	6.72	-	0.06*	0.05
6.78	-	-	6.83	0.05*	0.05
-	6.58	6.72	-	0.14*	0.05
-	6.58	-	6.83	0.25*	0.05
-	-	6.72	6.83	0.10*	0.05

* Significant at .05 level of confidence.

The table VIII shows that the mean difference values between asanas group and aerobic group, asanas group and proprioceptive training group, asanas group and control group, aerobic group and proprioceptive training group, aerobic group and control group, proprioceptive training group and control group 0.20, 0.06, 0.05, 0.14, 0.25 and 0.10 respectively on agility which were greater than and equal to the required confidence interval value 0.05 at .05 level of confidence. Hence, the above comparisons were significant.

The adjusted post-test mean values of asanas, aerobic, proprioceptive training and control groups on agility were graphically represented in figure 6.

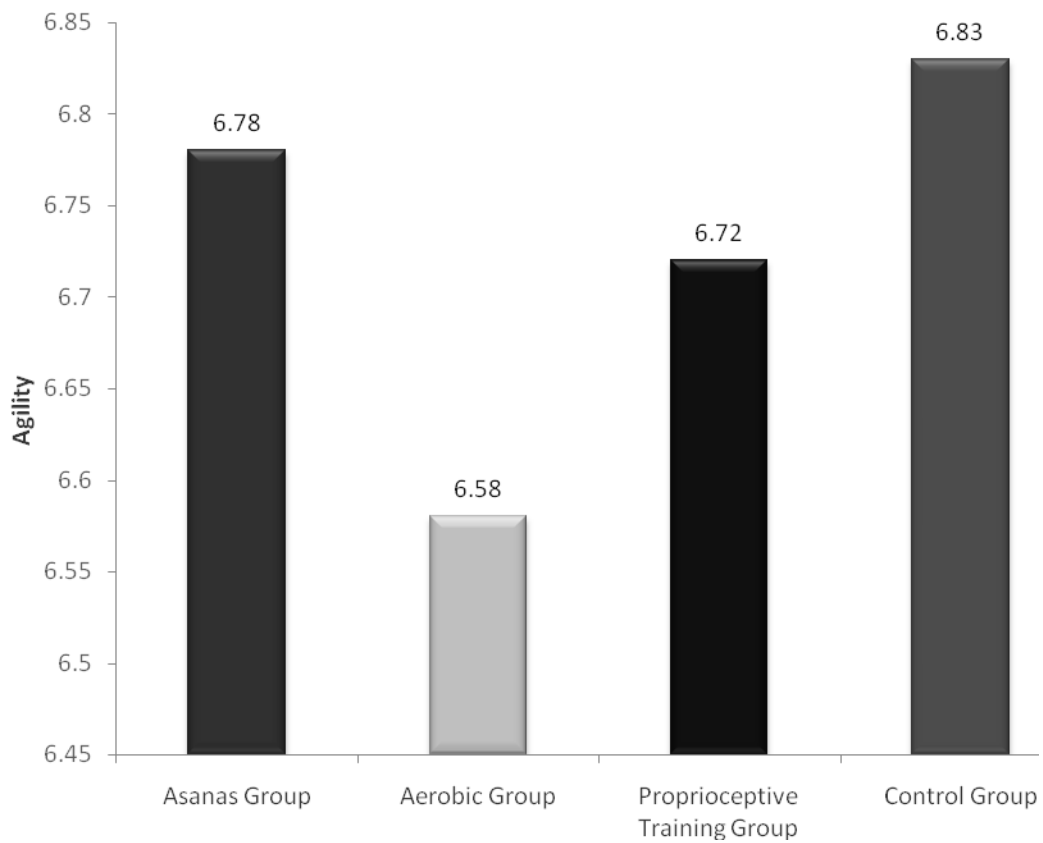


FIGURE 6: THE ADJUSTED POST-TEST MEAN VALUES OF ASANAS, AEROBIC, PROPRIOCEPTIVE TRAINING AND CONTROL GROUPS ON AGILITY

4.3.4 REACTION TIME

The analysis of covariance on reaction time of the pre and post test scores of asanas, aerobic, proprioceptive training and control groups have been analyzed and presented in Table IX.

Table – IX

COMPUTATION OF ANALYSIS OF CO-VARIANCE OF PRE TEST, POST TEST AND ADJUSTED POST TEST ON REACTION TIME OF DIFFERENT EXPERIMENTAL AND CONTROL GROUPS

Test	Asanas group	Aerobic group	Proprioceptive training group	Control group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test									
Mean	0.35	0.34	0.33	0.32	Between	0.0002	3	0.0001	0.36
S.D.	0.01	0.02	0.02	0.02	Within	0.0136	76	0.0002	
Post Test									
Mean	0.34	0.31	0.27	0.32	Between	0.0507	3	0.0169	108.01*
S.D.	0.01	0.01	0.02	0.02	Within	0.0119	76	0.0002	
Adjusted Post Test									
Mean	0.34	0.31	0.27	0.35	Between	0.0491	3	0.0164	178.97*
					Within	0.0069	75	0.0001	

* Significant at .05 level of confidence.

(The table values required for significance at .05 level of confidence for 3 and 76 and 3 and 75 are 2.728 and 2.73 respectively).

The table IX shows that the pre-test mean values on reaction time of asanas, aerobic, proprioceptive training and control groups were 0.35, 0.34, 0.33 and 0.32 respectively. The obtained 'F' ratio of 0.36 for pre-test scores is lesser than the table value of 2.728 for df 3 and 76 required for significance at .05 level of confidence on

reaction time. The post-test mean values on reaction time of asanas, aerobic, proprioceptive training and control groups 0.34, 0.31, 0.27 and 0.35 respectively. The obtained “F” ratio of 108.01 for post-test scores was more than the table value of 2.728 for df 3 and 76 required for significance at .05 level of confidence on reaction time.

The adjusted post-test means on reaction time of asanas, aerobic, proprioceptive training and control groups were 0.34, 0.31, 0.27 and 0.35 respectively. The obtained “F” ratio of 178.97 for adjusted post-test means is greater than the table value of 2.73 for df 3 and 75 required for significance at .05 level of confidence on reaction time.

The results of the study indicated that there was a significant difference between the adjusted post-test means of asanas, aerobic, proprioceptive training and control groups on reaction time.

Since, four groups were compared, whenever the obtained ‘F’ ratio for adjusted post test was found to be significant, the Scheffe’s test to find out the paired mean differences and it was presented in Table X.

Table - X
THE ORDERED SCHEFFE'S TEST FOR THE DIFFERENCES BETWEEN PAIRED MEANS ON REACTION TIME

Asanas group	Aerobic group	Proprioceptive training group	Control group	Mean Differences	Confidence Interval Value
0.34	0.31	-	-	0.03*	0.01
0.34	-	0.27	-	0.06*	0.01
0.34	-	-	0.35	0.01*	0.01
-	0.31	0.27	-	0.04*	0.01
-	0.31	-	0.35	0.04*	0.01
-	-	0.27	0.35	0.07*	0.01

* Significant at .05 level of confidence.

The table X shows that the mean difference values between asanas group and aerobic group, asanas group and proprioceptive training group, asanas group and control group, aerobic group and control group, aerobic group and proprioceptive training group, proprioceptive training group and control group 0.03, 0.06, 0.01, 0.04, 0.04 and 0.07 respectively on reaction time which were greater than required confidence interval value 0.01 at .05 level of confidence. Hence, the above comparisons were significant.

The adjusted post-test mean values of asanas, aerobic, proprioceptive training and control groups on reaction time were graphically represented in figure 7.

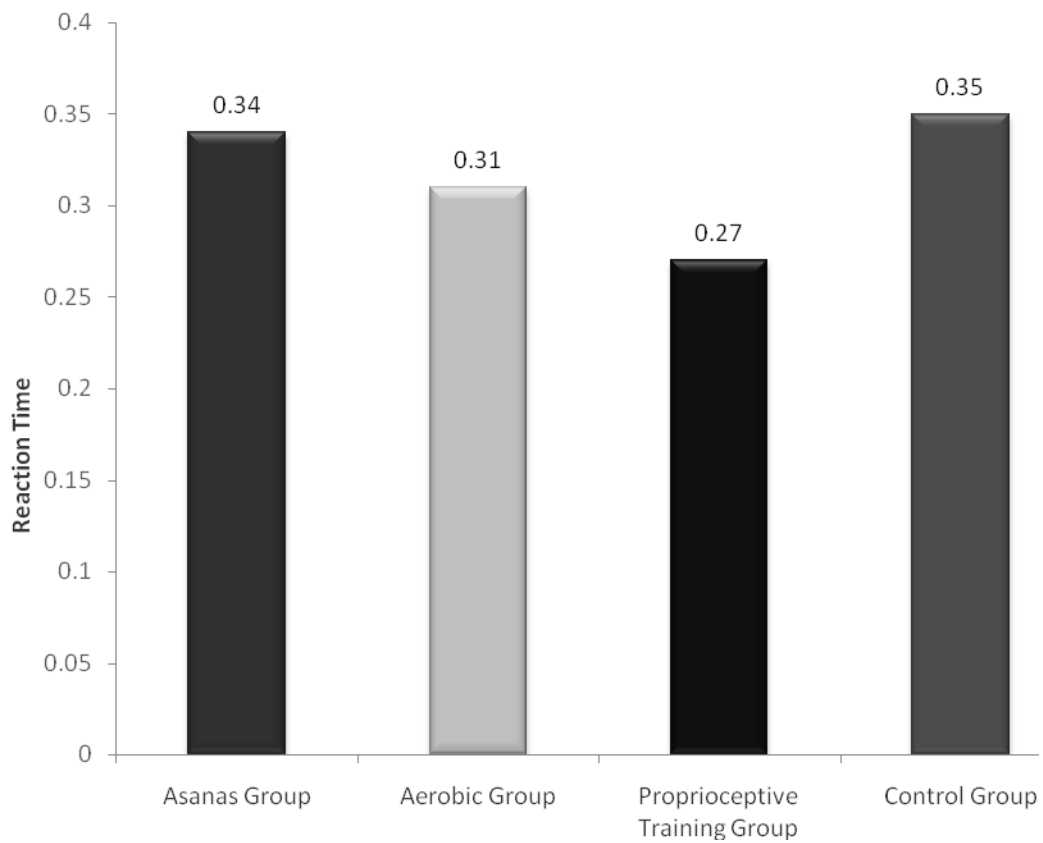


FIGURE 7: THE ADJUSTED POST-TEST MEAN VALUES OF ASANAS, AEROBIC, PROPRIOCEPTIVE TRAINING AND CONTROL GROUPS ON REACTION TIME

4.3.5 VITAL CAPACITY

The analysis of covariance on vital capacity of the pre and post test scores of asanas, aerobic, proprioceptive training and control groups have been analyzed and presented in Table XI.

Table –XI

COMPUTATION OF ANALYSIS OF CO-VARIANCE OF PRE TEST, POST TEST AND ADJUSTED POST TEST ON VITAL CAPACITY OF DIFFERENT EXPERIMENTAL AND CONTROL GROUPS

Test	Asanas group	Aerobic group	Proprioceptive training group	Control group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test									
Mean	4.26	4.27	4.25	4.24	Between	0.01	3	0.0018	1.17
S.D.	0.02	0.02	0.04	0.08	Within	0.12	76	0.0016	
Post Test									
Mean	4.31	4.57	4.37	4.26	Between	0.84	3	0.2786	371.60*
S.D.	0.01	0.02	0.01	0.06	Within	0.06	76	0.0007	
Adjusted Post Test									
Mean	4.31	4.56	4.38	4.26	Between	0.77	3	0.2574	635.01*
					Within	0.03	75	0.0004	

* Significant at .05 level of confidence.

(The table values required for significance at .05 level of confidence for 3 and 76 and 3 and 75 are 2.728 and 2.73 respectively).

The table XI shows that the pre-test mean values on vital capacity of asanas, aerobic, proprioceptive training and control groups were 4.26, 4.27, 4.25 and 4.24 respectively. The obtained 'F' ratio of 1.17 for pre-test scores was lesser than the table value of 2.728 for df 3 and 75 required for significance at .05 level of confidence

on vital capacity. The post-test mean values on vital capacity of asanas, aerobic, proprioceptive training and control groups were 4.31, 4.57, 4.37 and 4.26 respectively. The obtained “F” ratio of 371.60 for post-test scores was more than the table value of 2.728 for df 3 and 76 required for significance at .05 level of confidence on vital capacity.

The adjusted post-test means on vital capacity of asanas, aerobic, proprioceptive training and control groups were 4.31, 4.56, 4.38 and 4.26 respectively. The obtained “F” ratio of 635.01 for adjusted post-test means was greater than the table value of 2.73 for df 3 and 75 required 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 asanas, aerobic, proprioceptive training and control groups on vital capacity.

Since, four groups were compared, whenever the obtained ‘F’ ratio for adjusted post test was found to be significant, the Scheffe’s test to find out the paired mean differences and it was presented in Table XII.

Table - XII
THE ORDERED SCHEFFE'S TEST FOR THE DIFFERENCES BETWEEN
PAIRED MEANS ON VITAL CAPACITY

Asanas group	Aerobic group	Proprioceptive training group	Control group	Mean Differences	Confidence Interval Value
4.31	4.56	-	-	0.26*	0.03
4.31	-	4.38	-	0.07*	0.03
4.31	-	-	4.26	0.04*	0.03
-	4.56	4.38	-	0.18*	0.03
-	4.56	-	4.26	0.30*	0.03
-	-	4.38	4.26	0.12*	0.03

* Significant at .05 level of confidence.

The table XII shows that the mean difference values between asanas group and aerobic group, asanas group and proprioceptive training group, asanas group and control group, aerobic group and proprioceptive training group, aerobic group and control group, proprioceptive training group and control group 0.26, 0.07, 0.04, 0.18, 0.30 and 0.12 respectively on vital capacity which were greater than required confidence interval value 0.03 at .05 level of confidence. Hence, the above comparisons were significant

The adjusted post-test mean values of asanas, aerobic, proprioceptive training and control groups on vital capacity were graphically represented in figure 8.

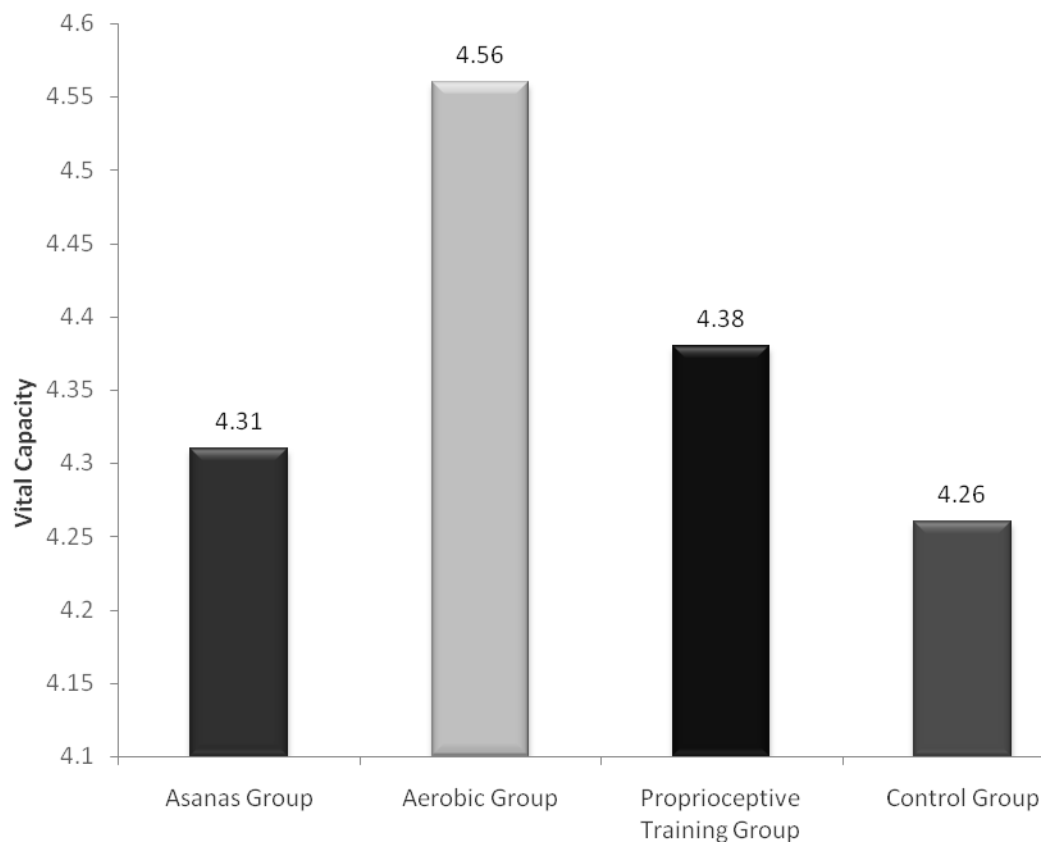


FIGURE 8: THE ADJUSTED POST-TEST MEAN VALUES OF ASANAS, AEROBIC, PROPRIOCEPTIVE TRAINING AND CONTROL GROUPS ON VITAL CAPACITY

4.3.6 RESTING PULSE RATE

The analysis of covariance on resting pulse rate of the pre and post test scores of asanas, aerobic, proprioceptive training and control groups have been analyzed and presented in Table XIII.

Table –XIII

COMPUTATION OF ANALYSIS OF CO-VARIANCE OF PRE TEST, POST TEST AND ADJUSTED POST TEST ON RESTING PULSE RATE OF DIFFERENT EXPERIMENTAL AND CONTROL GROUPS

Test	Asanas group	Aerobic group	Proprioceptive training group	Control group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test									
Mean	72.40	72.41	72.44	72.60	Between	0.45	3	0.15	0.25
S.D.	0.91	0.91	0.91	0.91	Within	46.40	76	0.61	
Post Test									
Mean	71.33	67.33	70.47	72.47	Between	218.27	3	72.76	172.08*
S.D.	0.90	0.62	0.64	0.83	Within	32.13	76	0.42	
Adjusted Post Test									
Mean	71.35	67.35	70.49	72.40	Between	212.24	3	70.75	225.66*
					Within	23.51	75	0.31	

* Significant at .05 level of confidence.

(The table values required for significance at .05 level of confidence for 3 and 76 and 3 and 75 are 2.728 and 2.73 respectively).

The table XIII shows that the pre-test mean values on resting pulse rate of asanas, aerobic, proprioceptive training and control groups were 72.40, 72.41, 72.44 and 72.60 respectively. The obtained 'F' ratio of 0.25 for pre-test scores was less than the table value of 2.728 for df 3 and 76 required for significance at .05 level of confidence on resting pulse rate. The post-test mean values on resting pulse rate of asanas, aerobic, proprioceptive training and control groups were 71.33, 67.33, 70.47 and 72.47 respectively. The obtained "F" ratio of 172.08 for post-test scores was more than the table value of 2.728 for df 3 and 76 required for significance at .05 level of confidence on resting pulse rate.

The adjusted post-test means on resting pulse rate of asanas, aerobic, proprioceptive training and control groups were 71.35, 67.35, 70.49 and 72.40 respectively. The obtained "F" ratio of 225.66 for adjusted post-test means was greater than the table value of 2.73 for df 3 and 75 required for significance at .05 level of confidence on resting pulse rate.

The results of the study indicated that there was a significant difference between the adjusted post-test means of asanas, aerobic, proprioceptive training and control groups on resting pulse rate.

Since, four groups were compared, whenever the obtained 'F' ratio for adjusted post test was found to be significant, the Scheffe's test to find out the paired mean differences and it was presented in Table XIV.

Table - XIV
THE ORDERED SCHEFFE'S TEST FOR THE DIFFERENCES BETWEEN
PAIRED MEANS ON RESTING PULSE RATE

Asanas group	Aerobic group	Proprioceptive training group	Control group	Mean Differences	Confidence Interval Value
71.35	67.35	-	-	4.00*	0.72
71.35	-	70.49	-	0.87*	0.72
71.35	-	-	72.40	1.05*	0.72
-	67.35	70.49	-	3.13*	0.72
-	67.35	-	72.40	5.05*	0.72
-	-	70.49	72.40	1.91*	0.72

* Significant at .05 level of confidence.

The table XIV shows that the mean difference values between asanas group and aerobic group, asanas group and proprioceptive training group, asanas group and control group, aerobic group and proprioceptive training group, aerobic group and control group, proprioceptive training group and control group 4.00, 0.87, 1.05, 3.13, 5.05 and 1.91 respectively on resting pulse rate which were greater than required confidence interval value 0.72 at .05 level of confidence. Hence, the above comparisons were significant.

The adjusted post-test mean values of asanas, aerobic, proprioceptive training and control groups on resting pulse rate were graphically represented in figure 9.

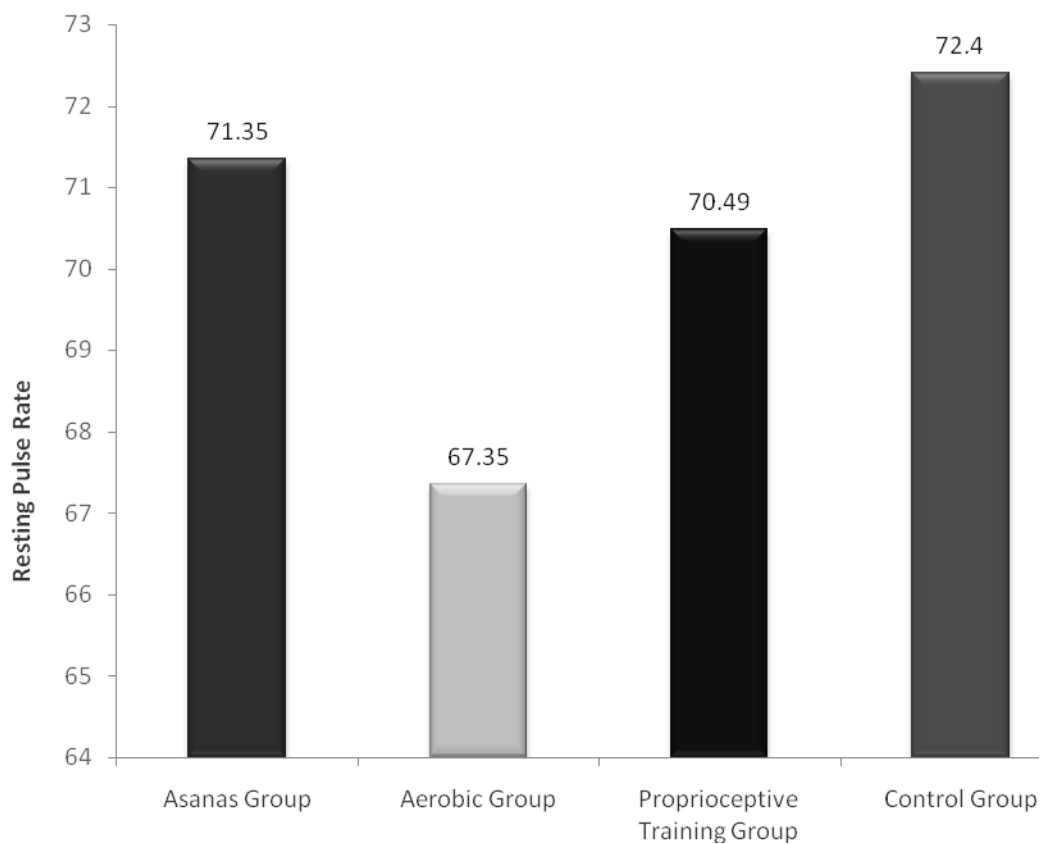


FIGURE 9: THE ADJUSTED POST-TEST MEAN VALUES OF ASANAS, AEROBIC, PROPRIOCEPTIVE TRAINING AND CONTROL GROUPS ON RESTING PULSE RATE

4.3.7 CARDIO VASCULAR ENDURANCE

The analysis of covariance on cardio vascular endurance of the pre and post test scores of asanas, aerobic, proprioceptive training and control groups have been analyzed and presented in Table XV.

Table – XV

COMPUTATION OF ANALYSIS OF CO-VARIANCE OF PRE TEST, POST TEST AND ADJUSTED POST TEST ON CARDIO VASCULAR ENDURANCE OF DIFFERENT EXPERIMENTAL AND CONTROL GROUPS

Test	Asanas group	Aerobic group	Proprioceptive training group	Control group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test									
Mean	1474.20	1471.20	1472.87	1478.00	Between	377.20	3	125.73	1.19
S.D.	12.69	14.32	13.08	5.92	Within	8012.53	76	105.43	
Post Test									
Mean	1524.00	1658.67	1576.00	1479.00	Between	267701.25	3	89233.75	916.04*
S.D.	14.04	13.02	11.83	4.71	Within	7403.33	76	97.41	
Adjusted Post Test									
Mean	1523.97	1659.33	1576.28	1478.09	Between	261376.06	3	87125.35	936.92*
					Within	6974.34	75	92.99	

* Significant at .05 level of confidence.

(The table values required for significance at .05 level of confidence for 3 and 76 and 3 and 75 are 2.728 and 2.73 respectively).

The table XV shows that the pre-test mean values on cardio vascular endurance of asanass, aerobic, proprioceptive training and control groups were 1474.20, 1471.20, 1472.87 and 1478.00 respectively. The obtained 'F' ratio of 1.19 for pre-test scores was lesser than the table value of 2.728 for df 3 and 76 required for significance at .05 level of confidence on cardio vascular endurance. The post-test mean values on cardio vascular endurance of asanas, aerobic, proprioceptive training and control groups 341524.00, 1658.67, 1576.00 and 1479.00 respectively. The obtained "F" ratio of 916.04 for post-test scores was more than the table value of 2.728 for df 3 and 76 required for significance at .05 level of confidence on cardio vascular endurance.

The adjusted post-test means on cardio vascular endurance of asanas, aerobic, proprioceptive training and control groups were 1523.97, 1659.33, 1576.28 and 1478.09 respectively. The obtained "F" ratio of 936.92 for adjusted post-test means was greater than the table value of 2.73 for df 3 and 75 required for significance at .05 level of confidence on cardio vascular endurance.

The results of the study indicated that there was a significant difference between the adjusted post-test means of asanas, aerobic, proprioceptive training and control groups on cardio vascular endurance.

Since, four groups were compared, whenever the obtained 'F' ratio for adjusted post test was found to be significant, the Scheffe's test to find out the paired mean differences and it was presented in Table XVI

Table - XVI
THE ORDERED SCHEFFE'S TEST FOR THE DIFFERENCES BETWEEN
PAIRED MEANS ON CARDIO VASCULAR ENDURANCE

Asanas group	Aerobic group	Proprioceptive training group	Control group	Mean Differences	Confidence Interval Value
1523.97	1659.33	-	-	135.36*	12.45
1523.97	-	1576.28	-	52.31*	12.45
1523.97	-	-	1478.09	45.88*	12.45
-	1659.33	1576.28	-	83.05*	12.45
-	1659.33	-	1478.09	181.24*	12.45
-	-	1576.28	1478.09	98.19*	12.45

* Significant at .05 level of confidence.

The table XVI shows that the mean difference values between asanas group and aerobic group, asanas group and proprioceptive training group, asanas group and control group, aerobic group and proprioceptive training group, aerobic group and control group, proprioceptive training group and control group 135.36, 52.31, 45.88, 83.05, 181.24 and 98.19 respectively on cardio vascular endurance which were greater than required confidence interval value 12.45 at .05 level of confidence. Hence, the above comparisons were significant.

The adjusted post-test mean values of asanas, aerobic, proprioceptive training and control groups on cardio vascular endurance were graphically represented in figure 10.

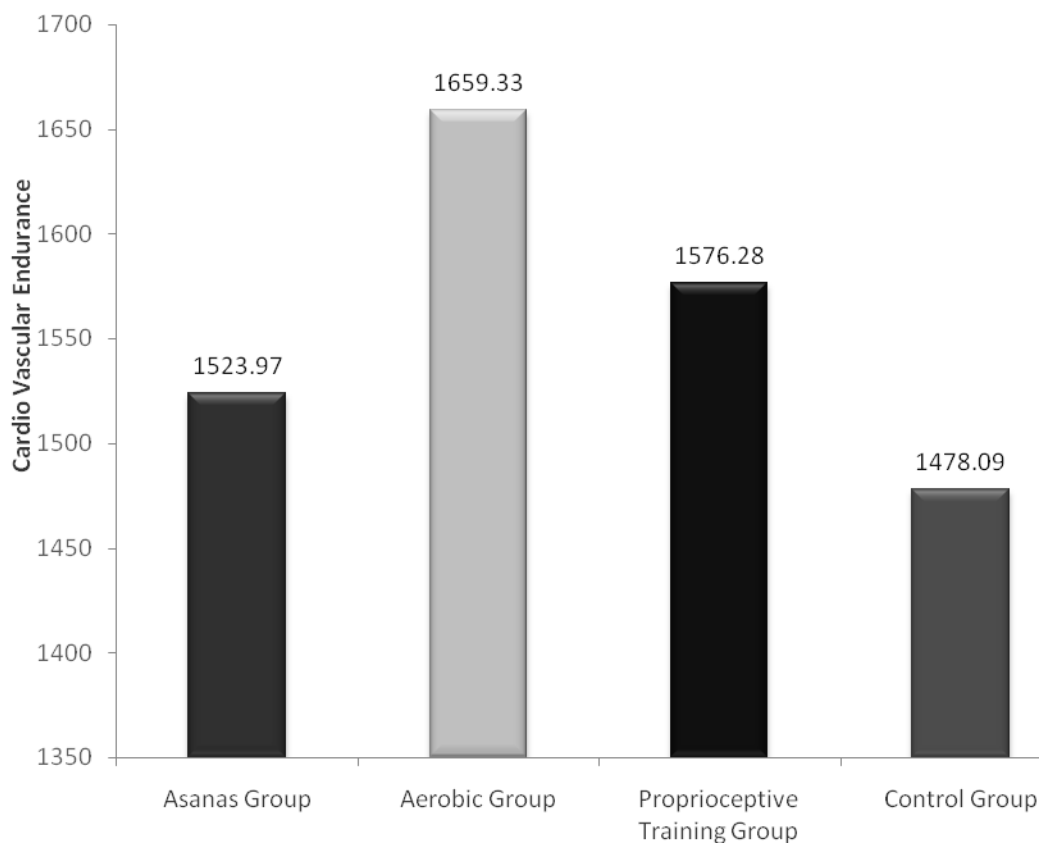


FIGURE 10: THE ADJUSTED POST-TEST MEAN VALUES OF ASANAS, AEROBIC, PROPRIOCEPTIVE TRAINING AND CONTROL GROUPS ON CARDIO VASCULAR ENDURANCE

4.3.8 BREATH HOLDING TIME

The analysis of covariance on breath holding time of the pre and post test scores of asanas, aerobic, proprioceptive training and control groups have been analyzed and presented in Table XVII.

Table –XVII

COMPUTATION OF ANALYSIS OF CO-VARIANCE OF PRE TEST, POST TEST AND ADJUSTED POST TEST ON BREATH HOLDING TIME OF DIFFERENT EXPERIMENTAL AND CONTROL GROUPS

Test	Asanas group	Aerobic group	Proprioceptive training group	Control group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test									
Mean	48.07	48.10	48.09	47.73	Between	1.25	3	0.42	0.57
S.D.	1.03	1.03	1.03	0.88	Within	55.73	76	0.73	
Post Test									
Mean	49.20	54.93	51.93	48.07	Between	442.32	3	147.44	191.44*
S.D.	0.92	1.39	0.80	0.88	Within	58.53	76	0.77	
Adjusted Post Test									
Mean	49.21	54.88	51.88	48.22	Between	422.14	3	140.71	275.14*
					Within	38.36	75	0.51	

* Significant at .05 level of confidence.

(The table values required for significance at .05 level of confidence for 3 and 76 and 3 and 75 are 2.728 and 2.73 respectively).

The table XVII shows that the pre-test mean values on breath holding time of asanas, aerobic, proprioceptive training and control groups were 48.07, 48.10, 48.09 and 47.73 respectively. The obtained 'F' ratio of 0.57 for pre-test scores was greater than the table value of 2.728 for df 3 and 76 required for significance at .05 level of

confidence on breath holding time. The post-test mean values on breath holding time of asanas, aerobic, proprioceptive training and control groups were 49.20, 54.93, 51.93 and 48.07 respectively. The obtained “F” ratio of 191.44 for post-test scores was more than the table value of 2.728 for df 3 and 76 required for significance at .05 level of confidence on breath holding time.

The adjusted post-test means on breath holding time of asanas, aerobic, proprioceptive training and control groups were 49.21, 54.88, 51.88 and 48.22 respectively. The obtained “F” ratio of 275.14 for adjusted post-test means was greater than the table value of 2.73 for df 3 and 75 required for significance at .05 level of confidence on breath holding time.

The results of the study indicated that there was a significant difference between the adjusted post-test means of asanas, aerobic, proprioceptive training and control groups on breath holding time.

Since, four groups were compared, whenever the obtained ‘F’ ratio for adjusted post test was found to be significant, the Scheffe’s test to find out the paired mean differences and it was presented in Table XVIII.

Table - XVIII
THE ORDERED SCHEFFE'S TEST FOR THE DIFFERENCES BETWEEN
PAIRED MEANS ON BREATH HOLDING TIME

Asanas group	Aerobic group	Proprioceptive training group	Control group	Mean Differences	Confidence Interval Value
49.21	54.88	-	-	5.67*	0.92
49.21	-	51.88	-	2.67*	0.92
49.21	-	-	48.22	0.99*	0.92
-	54.88	51.88	-	3.00*	0.92
-	54.88	-	48.22	6.67*	0.92
-	-	51.88	48.22	3.67*	0.92

* Significant at .05 level of confidence.

The table XVIII shows that the mean difference values between asanas group and aerobic group, asanas group and proprioceptive training group, asana group and control group, aerobic group and proprioceptive training group, aerobic group and control group, proprioceptive training group and control group 5.67, 2.67, 0.99, 3.00, 6.67 and 3.67 respectively on breath holding time which were greater than required confidence interval value 0.92 at .05 level of confidence. Hence, the above comparisons were significant.

The adjusted post-test mean values of asanas, aerobic, proprioceptive training and control groups on breath holding time were graphically represented in figure 11.

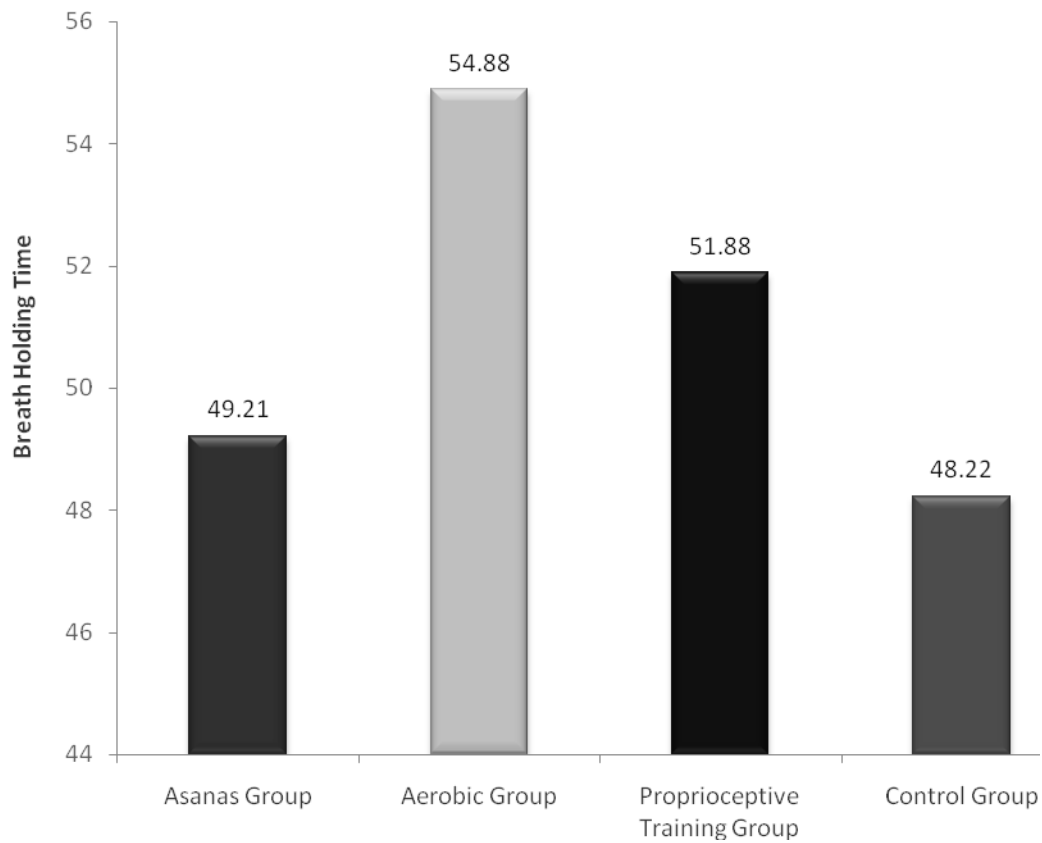


FIGURE 11: THE ADJUSTED POST-TEST MEAN VALUES OF ASANAS, AEROBIC, PROPRIOCEPTIVE TRAINING AND CONTROL GROUPS ON BREATH HOLDING TIME

4.3.9 DRIBBLING

The analysis of covariance on dribbling of the pre and post test scores of asanas, aerobic, proprioceptive training and control groups have been analyzed and presented in Table XIX.

Table –XIX

COMPUTATION OF ANALYSIS OF CO-VARIANCE OF PRE TEST, POST TEST AND ADJUSTED POST TEST ON DRIBBLING OF DIFFERENT EXPERIMENTAL AND CONTROL GROUPS

Test	Asanas group	Aerobic group	Proprioceptive training group	Control group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test									
Mean	24.27	24.13	24.20	24.12	Between	0.18	3	0.06	0.22
S.D.	0.59	0.52	0.56	0.74	Within	20.80	76	0.27	
Post Test									
Mean	23.93	21.33	23.20	23.93	Between	67.80	3	22.60	79.52*
S.D.	0.59	0.49	0.68	0.70	Within	21.60	76	0.28	
Adjusted Post Test									
Mean	23.88	21.37	23.19	23.97	Between	65.36	3	21.79	136.20*
					Within	12.00	75	0.16	

* Significant at .05 level of confidence.

(The table values required for significance at .05 level of confidence for 3 and 76 and 3 and 75 are 2.728 and 2.73 respectively).

The table XIX shows that the pre-test mean values on dribbling of asanas, aerobic, proprioceptive training and control groups were 24.27, 24.13, 24.20, and 24.12 respectively. The obtained 'F' ratio of 0.22 for pre-test scores is less than the

table value of 2.728 for df 3 and 76 required for significance at .05 level of confidence on dribbling. The post-test mean values on dribbling of asanas, aerobic, proprioceptive training and control groups 23.93, 21.33, 23.20 and 23.93 respectively. The obtained “F” ratio of 79.52 for post-test scores was more than the table value of 2.728 for df 3 and 76 required for significance at .05 level of confidence on dribbling.

The adjusted post-test means on dribbling of asanas, aerobic, proprioceptive training and control groups 23.88, 21.37, 23.19 and 23.97 respectively. The obtained “F” ratio of 136.20 for adjusted post-test means was greater than the table value of 2.73 for df 3 and 75 required for significance at .05 level of confidence on dribbling.

The results of the study indicated that there was a significant difference between the adjusted post-test means of asanas, aerobic, proprioceptive training and control groups on dribbling.

Since, four groups were compared, whenever the obtained ‘F’ ratio for adjusted post test was found to be significant, the Scheffe’s test to find out the paired mean differences and it was presented in Table XX.

Table - XX
THE ORDERED SCHEFFE'S TEST FOR THE DIFFERENCES BETWEEN PAIRED MEANS ON DRIBBLING

Asanas group	Aerobic group	Proprioceptive training group	Control group	Mean Differences	Confidence Interval Value
23.88	21.37	-	-	2.51*	0.52
23.88	-	23.19	-	0.69*	0.52
23.88	-	-	23.97	0.09	0.52
-	21.37	23.19	-	1.82*	0.52
-	21.37	-	23.97	2.60*	0.52
-	-	23.19	23.97	0.78*	0.52

* Significant at .05 level of confidence.

The table XX shows that the mean difference values between asanas group and aerobic group, asanas group and proprioceptive training group, aerobic group and proprioceptive training group, aerobic group and control group, proprioceptive training group and control group 2.51, 0.69, 1.82, 2.60 and 0.78 respectively on dribbling which were greater than required confidence interval value 0.52 at .05 level of confidence. Hence, the above comparisons were significant and also it shows that the mean difference values between asanas group and control group, 0.09 on dribbling which were lesser than required confidence interval value 0.52 at .05 level of confidence. Hence, the above comparison was not significant.

The adjusted post-test mean values of asanas, aerobic, proprioceptive training and control groups on dribbling were graphically represented in figure 12.

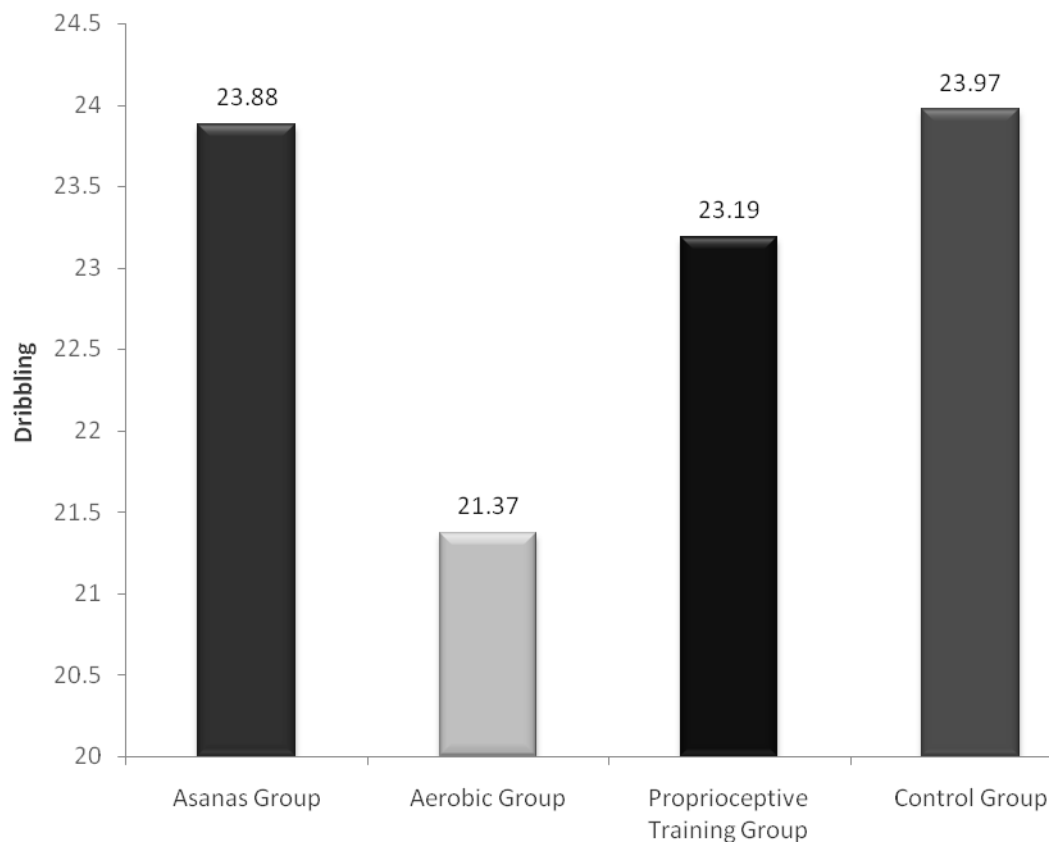


FIGURE 12: THE ADJUSTED POST-TEST MEAN VALUES OF ASANAS, AEROBIC, PROPRIOCEPTIVE TRAINING AND CONTROL GROUPS ON DRIBBLING

4.3.10 PASSING

The analysis of covariance on Passing of the pre and post test scores of asanas, aerobic, proprioceptive training and control groups have been analyzed and presented in Table XXI.

Table – XXI

COMPUTATION OF ANALYSIS OF CO-VARIANCE OF PRE TEST, POST TEST AND ADJUSTED POST TEST ON PASSING OF DIFFERENT EXPERIMENTAL AND CONTROL GROUPS

Test	Asanas group	Aerobic group	Proprioceptive training group	Control group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test									
Mean	5.42	5.40	5.37	5.38	Between	0.02	3	0.0063	0.49
S.D.	0.14	0.11	0.13	0.15	Within	0.98	76	0.0128	
Post Test									
Mean	5.47	5.51	5.57	5.40	Between	0.23	3	0.0769	6.33*
S.D.	0.12	0.12	0.12	0.15	Within	0.92	76	0.0122	
Adjusted Post Test									
Mean	5.45	5.50	5.59	5.41	Between	0.27	3	0.0896	23.66*
					Within	0.28	75	0.0038	

* Significant at .05 level of confidence.

(The table values required for significance at .05 level of confidence for 3 and 76 and 3 and 75 are 2.728 and 2.73 respectively).

The table XXI shows that the pre-test mean values on passing of asanas, aerobic, proprioceptive training and control groups were 5.42, 5.40, 5.37 and 5.38 respectively. The obtained 'F' ratio of 0.49 for pre-test scores is less than the table

value of 2.728 for df 3 and 76 required for significance at .05 level of confidence on passing. The post-test mean values on Passing of asanas, aerobic, proprioceptive training and control groups were 5.47, 5.51, 5.57 and 5.40 respectively. The obtained “F” ratio of 6.33 for post-test scores was more than the table value of 2.728 for df 3 and 76 required for significance at .05 level of confidence on passing.

The adjusted post-test means on Passing of asanas, aerobic, proprioceptive training and control groups were 5.45, 5.50, 5.59 and 5.41 respectively. The obtained “F” ratio of 23.66 for adjusted post-test means was greater than the table value of 2.77 for df 3 and 75 required for significance at .05 level of confidence on passing.

The results of the study indicated that there was a significant difference between the adjusted post-test means of asanas, aerobic, proprioceptive training and control groups on Passing.

Since, four groups were compared, whenever the obtained ‘F’ ratio for adjusted post test was found to be significant, the Scheffe’s test to find out the paired mean differences and it was presented in Table XXII.

Table - XXII
THE ORDERED SCHEFFE'S TEST FOR THE DIFFERENCES BETWEEN
PAIRED MEANS ON PASSING

Asanas group	Aerobic group	Proprioceptive training group	Control group	Mean Differences	Confidence Interval Value
5.45	5.50	-	-	0.05*	0.08
5.45	-	5.59	-	0.14*	0.08
5.45	-	-	5.41	0.04	0.08
-	5.50	5.59	-	0.09*	0.08
-	5.50	-	5.41	0.09*	0.08
-	-	5.59	5.41	0.18*	0.08

* Significant at .05 level of confidence.

The table XXII shows that the mean difference values between asanas group and aerobic group, asanas group and proprioceptive training group, aerobic group and proprioceptive training group, aerobic group and control group, proprioceptive training group and control group 0.05, 0.14, 0.09, 0.09 and 0.18 respectively on passing which were greater than required confidence interval value 0.09 at .05 level of confidence. Hence, the above comparisons were significant and also it shows that the mean difference values between asanas group and control group, 0.04 on passing which were lesser than required confidence interval value 0.08 at .05 level of confidence. Hence, the above comparison was not significant.

The adjusted post-test mean values of asanas, aerobic, proprioceptive training and control groups on Passing were graphically represented in figure 13.

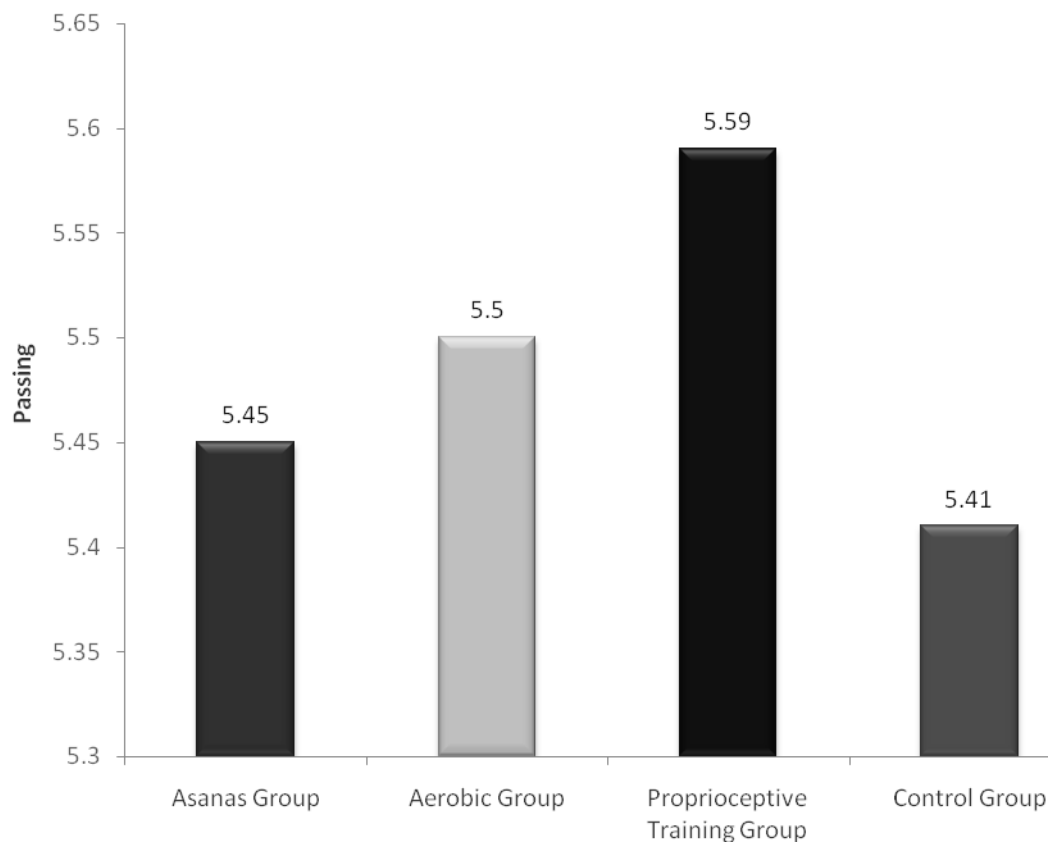


FIGURE 13: THE ADJUSTED POST-TEST MEAN VALUES OF ASANAS, AEROBIC, PROPRIOCEPTIVE TRAINING AND CONTROL GROUPS ON PASSING

4.3.11 SHOOTING

The analysis of covariance on shooting of the pre and post test scores of asanas, aerobic, proprioceptive training and control groups have been analyzed and presented in Table XXIII.

Table – XXIII

COMPUTATION OF ANALYSIS OF CO-VARIANCE OF PRE TEST, POST TEST AND ADJUSTED POST TEST ON SHOOTING OF DIFFERENT EXPERIMENTAL AND CONTROL GROUPS

Test	Asanas group	Aerobic group	Proprioceptive training group	Control group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained 'F' Ratio
Pre Test									
Mean	26.73	26.60	26.93	26.80	Between	0.87	3	0.29	0.38
S.D.	1.03	0.99	1.03	1.01	Within	57.87	76	0.76	
Post Test									
Mean	27.53	28.67	31.40	27.07	Between	169.73	3	56.58	103.36*
S.D.	0.92	0.72	0.63	1.10	Within	41.60	76	0.55	
Adjusted Post Test									
Mean	27.56	28.79	31.28	27.04	Between	159.85	3	53.28	397.95*
					Within	10.04	75	0.13	

* Significant at .05 level of confidence.

(The table values required for significance at .05 level of confidence for 3 and 76 and 3 and 75 are 2.728 and 2.73 respectively).

The table XXIII shows that the pre-test mean values on shooting of asanas, aerobic, proprioceptive training and control groups were 26.73, 26.60, 26.93 and 26.80 respectively. The obtained 'F' ratio of 0.38 for pre-test scores was lesser than the table value of 2.728 for df 3 and 76 required for significance at .05 level of

confidence on shooting. The post-test mean values on shooting of asanas, aerobic, proprioceptive training and control groups were 27.53, 28.67, 31.40 and 27.07 respectively. The obtained “F” ratio of 103.36 for post-test scores was more than the table value of 2.728 for df 3 and 76 required for significance at .05 level of confidence on shooting.

The adjusted post-test means on shooting of asanas, aerobic, proprioceptive training and control groups were 27.56, 28.79, 31.28 and 27.04 respectively. The obtained “F” ratio of 397.95 for adjusted post-test means was greater than the table value of 2.73 for df 3 and 75 required for significance at .05 level of confidence on shooting.

The results of the study indicated that there was a significant difference between the adjusted post-test means of asanas, aerobic, proprioceptive training and control groups on shooting.

Since, four groups were compared, whenever the obtained ‘F’ ratio for adjusted post-test was found to be significant, the Scheffe’s test to find out the paired mean differences and it was presented in Table XXIV.

Table - XXIV
THE ORDERED SCHEFFE'S TEST FOR THE DIFFERENCES BETWEEN
PAIRED MEANS ON SHOOTING

Asanas group	Aerobic group	Proprioceptive training group	Control group	Mean Differences	Confidence Interval Value
27.56	28.79	-	-	1.23*	0.47
27.56	-	31.28	-	3.72*	0.47
27.56	-	-	27.04	0.52*	0.47
-	28.79	31.28	-	2.49*	0.47
-	28.79	-	27.04	1.75*	0.47
-	-	31.28	27.04	4.23*	0.47

* Significant at .05 level of confidence.

The table XXIV shows that the mean difference values between asanas group and aerobic group, asanas group and proprioceptive training group, asanas group and control group, aerobic group and proprioceptive training group, aerobic group and control group, proprioceptive training group and control group 1.23, 3.72, 0.52, 2.49, 1.75 and 4.23 respectively on shooting which were greater than required confidence interval value 0.47 at .05 level of confidence. Hence, the above comparisons were significant.

The adjusted post-test mean values of asanas, aerobic, proprioceptive training and control groups on shooting were graphically represented in figure 14.

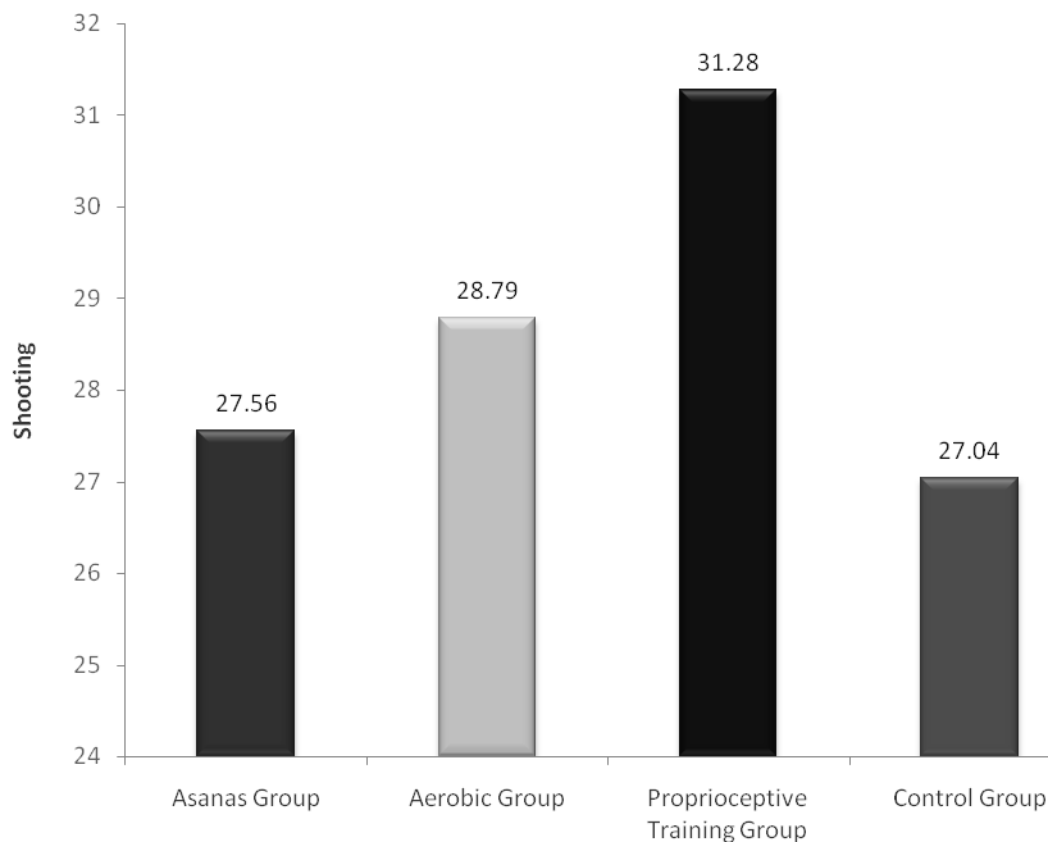


FIGURE 14: THE ADJUSTED POST-TEST MEAN VALUES OF ASANAS, AEROBIC, PROPRIOCEPTIVE TRAINING AND CONTROL GROUPS ON SHOOTING

4.4 RESULTS OF THE STUDY

4.4.1 MOTOR FITNESS VARIABLES

(Speed, Explosive Power, Agility and Reaction Time)

There was a significant difference among asanas, aerobic, proprioception and control groups on selected motor fitness, variables such as speed, explosive power, agility and reaction time.

There was a significant improvement on selected motor ability components such as speed, explosive power, agility and reaction time due to asanas, aerobic, proprioceptive trainings.

4.4.2 PHYSIOLOGICAL VARIABLES

(Vital capacity, Resting Pulse Rate, Cardio vascular endurance and Breath holding time)

There was a significant difference among asanas, aerobic, proprioception and control groups on selected physiological variables namely vital capacity, resting pulse rate, cardio vascular endurance and breath holding time.

There was a significant improvement on selected physiological variables namely vital capacity, cardio vascular endurance and breath holding time due to asanas, aerobic, proprioceptive trainings. And also significant reduction on selected physiological variable namely resting pulse rate due to asanas, aerobic, proprioceptive trainings.

4.4.3 PERFORMANCE VARIABLES (Passing, Dribbling and Shooting)

There was a significant difference among asanas, aerobic, proprioception and control groups on selected performance variables namely passing, dribbling and shooting. Further the result of the study indicated there was a significant improvement on selected performance variables namely passing, dribbling and shooting due to aerobic, proprioceptive trainings. The results of the study showed that there was no significant improvement on selected performance variables namely passing and dribbling due to asanas. There was a significant improvement on shooting due to asanas.

4.5 DISCUSSION ON FINDINGS

The results of the study showed that there was a significant difference among asanas, aerobic, proprioceptive training and control groups on selected motor fitness, variables such as speed, explosive power, agility and reaction time significant improvements were noticed on selected motor ability components such as speed, explosive power, agility and reaction time due to asanas, aerobic, proprioceptive trainings.

There was a significant difference among asanas, aerobic, proprioceptive training and control groups on selected physiological variables namely vital capacity, resting pulse rate, cardio vascular endurance and breath holding time and there was a significant improvement on selected physiological variables namely vital capacity, cardio vascular endurance and breath holding time due to asanas, aerobic,

proprioceptive trainings and also significant reduction on selected physiological variable namely resting pulse rate due to asanas, aerobic, proprioceptive trainings.

There was a significant difference among asanas, aerobic, proprioception and control groups on selected performance variables namely passing, dribbling and shooting and there was a significant improvement on selected performance variables namely passing, dribbling and shooting due to aerobic, proprioceptive trainings. The results of the study showed that there was no significant improvement on selected performance variables namely passing and dribbling due to asanas. There was a significant improvement on shooting due to asanas.

Ray, et.al. (2001) undertook a study to observe the beneficial effects of yogic practices during training period on the young trainees. Madanmohan, et al., (2000) studied the effects of yoga training on cardiovascular response to exercise and the time course of recovery after the exercise. Schell et al., (1994) conducted a study on physiological and psychological effects of Hatha-Yoga exercise in healthy women. Mark D. Tran MS, et al (2007) found ten healthy, untrained volunteers (nine females and one male), ranging in age from 18–27 years, were studied to determine the effects of hatha yoga practice on the health-related aspects of physical fitness, including muscular strength and endurance, flexibility, cardio respiratory fitness, body composition, and pulmonary function. And they all found positive improvement on selected variables due to asanas.

The results of the study conducted by Jadhav S.G et al, (2009), Steven Rosenzweig et al, (2003) Walls, Melissa Delaney et al (2007), korkusuz et al.,

(2009), Chaya M.S et al, (2006) and Senthil et al., (2012) were in accordance with the results of the present study.

Ray U.S et al, (2001) studied the effect of yoga practice for 5 and 10 months, on randomly selected (54) trainees. Kanwaljeet Singh et al (2010) assessed the effects of selected meditative asanas on kinesthetic perception and movement speed. And found the improvements on selected criterion variables due to yogasanas practices.

McMillan, K et al. (2004) studied the Physiological adaptations to soccer specific endurance training in professional youth soccer players. Chamari, K et al. (2004) studied the Appropriate interpretation of aerobic capacity: allometric scaling in adult and young soccer players. Helgerud, J et al. (2001) studied the Aerobic endurance training improves soccer performance. Chamari, K et al. (2003) studied the Endurance training and testing with the ball in young elite soccer players. Valeria Leme Goncalves Panissa et al. (2012) This study aimed to analyze the effect of the time interval after high-intensity aerobic exercise on strength performance in individuals with different training backgrounds. Lukas Cipryan and Vojtech Gajda. (2011) studied The Influence of Aerobic Power on Repeated Anaerobic Exercise in Junior Soccer Players.

Kinisler et.al. (2001) studied the effect of step aerobics and aerobics dancing training on blood lipids and lipoproteins. Park, et al., (2003) studied the effect of long term aerobic exercise on maximal oxygen consumption, left ventricular function and serum lipids in elderly women. Katznel et al., (1997) documented the sequential effects of aerobic exercise training and weight loss on risk factors for coronary disease in healthy, obese, middle aged men and older men.

Carl G. Mattacola et al. (1997) studied the Effects of a 6-Week Strength and Proprioception Training Program on Measures of Dynamic Balance. Willardson, Jeffrey M. (2007) studied the Core Stability Training: Applications to Sports Conditioning Programs. Yaggie et al. (2006) studied the Effects of balance training on selected skills. Funk et al. (2003) studied the Impact of Prior Exercise on Hamstring Flexibility: A Comparison of Proprioceptive Neuromuscular Facilitation and Static Stretching. Eadric Bressel ED et al. (2007) studied the Comparison of Static and Dynamic Balance in Male Collegiate Soccer, Basketball, and Gymnastics Athletes. Alaj et al. (2007) studied the The Effects of Proprioceptive Training on Jumping and Agility Performance. Decicco and Fisher (2005) was to compare the effects of the contract-relax-contract (CRC) and hold-relax-contract (HRC) proprioceptive neuromuscular facilitation (PNF) stretching programs against a control, on external range of motion (ROM) of the shoulder in apparently healthy athletes. Cornelius et al. (1999) was to determine the effects of modified proprioceptive Neuromuscular Facilitation (PNF) flexibility techniques on hip flexion in college males. Ferber, Osternig and Gravelle. (2000) examined the effects if proprioceptive neuromuscular facilitation (PNF) stretch techniques on older adults. Borghuis et al., (2008) studied the importance of sensory-motor control has implications for the development of measurement and training protocols. **Loudon (2008)** studied the functional ankle instability (FAI) is a term used to describe an ankle that easily 'gives way' with activity.

Evert Verhagen et al., (2004) studied about the ankle sprains which are the most common injuries in a variety of sports. A proprioceptive balance board program is effective for prevention of ankle sprains in volleyball players. Paul A.

Borsa et al., (1997) studied a group of anterior cruciate ligament-deficient athletes to identify whether joint position and direction of joint motion have a significant effect on proprioception. Amy Fu et al., (2005) studied the deficiencies in ankle proprioception and standing balance in basketball players with multiple ankle sprains have been reported in separate studies. Verhagen (2005) evaluated the cost effectiveness of a proprioceptive balance board training programme for the prevention of ankle sprains in volleyball. The above findings showed the significant improvements on the recovery of the injury and also selected dependent variables due to proprioceptive training and Kofotolis et al., (2005) are in accordance with the results of the present study.

4.6 DISCUSSION ON HYPOTHESES

In the earlier, the researcher had formulated the following hypotheses,

The first hypothesized formed that there would be significant improvement on selected criterion variables such as speed, explosive power, agility, reaction time, vital capacity, cardio vascular endurance, breath holding time, dribbling ability, passing ability and shooting ability among football players due to asanas, aerobics and proprioceptive training. The results of the study showed that the selected dependent variables such as speed, explosive power, agility, reaction time, vital capacity, rate, cardio vascular endurance, breath holding time, passing, dribbling and shooting ability will be significantly improved due to the influence of asanas, aerobics and proprioceptive training among football players Hence, the researcher's first hypothesis was accepted.

In second hypothesized formed that there would be significant difference among the experimental groups on selected motor fitness (speed, explosive power, agility and reaction time), physiological (vital capacity, resting pulse rate, cardiovascular endurance and breath holding time), performance variables (dribbling ability, passing ability and shooting ability) among football players. The results of the study showed that there was a significant difference among asanas, aerobics and proprioceptive training and control groups on selected dependent variables such as speed, explosive power, agility, reaction time, vital capacity, resting pulse rate, cardiovascular endurance, breath holding time, passing, dribbling and shooting ability among football players. Hence, the researcher's second hypothesis was accepted