

CHAPTER IV

RESULTS AND DISCUSSIONS

4.1 OVERVIEW

This chapter deals with analyzing the data from the data samples under study. To facilitate the study sixty college women cricket players from different colleges in Chennai were randomly selected as subjects and their age was between 18 and 25 years. They were assigned into two groups of which one group served as yogic practices group, and the other group served as control group. The requirements of the experimental procedures, testing as well as exercise schedules were explained to them so as to avoid any ambiguity of the effort required on their part and prior to the administration of the study, the investigator got the individual consent from each subject. The study was formulated as a true random group design, consisting of a pre test and post test. The subjects (n=60) were randomly assigned to two groups of thirty college women in each. The groups were assigned as experimental groups and control group respectively. The research scholar reviewed the various scientific literature pertaining to the yogic practices on selected physiological, hematological, psychological variables and performance related variables from books, journals, periodicals, magazines and research papers and selected relevant variables in consultation with the guide for this study. Pre tests were conducted for all the subjects on selected physiological, hematological, psychological and performance related variables, namely, resting heart rate, breath holding time, mean arterial blood pressure, hemoglobin, red blood cells, white blood cells, anxiety, temperament, locus of control, batting, bowling and fielding. The

experimental groups underwent initial learning practices for one week followed by respective yogic practices for a period of twelve weeks. The post tests were conducted on the above said dependent variables after a period twelve weeks of yogic practices. The difference between initial and final scores was considered as the effect of yogic practices.

4.2 TEST OF SIGNIFICANCE

As Clarke and Clarke (1970) stated, “these data must be analysed in ways appropriate to the research design. Such analysis can only be appropriate to the research design and can only accomplished through the application of pertinent statistics”.

This is the vital portion of thesis achieving the conclusion by examining the hypotheses. The procedure of testing the hypotheses was either by accepting the hypotheses or rejecting the same in accordance with the results obtained in relation to the level of confidence. The test was usually called the test of significance since we test whether the differences between two groups or within many group scores were significant or not. In this study, if the obtained F-value were greater than the table value, the null hypotheses were rejected to the effect that there existed significant difference among the means of the groups compared and if the obtained values were lesser than the required values, then the null hypotheses were accepted to the effect that there existed no significant differences among the means of the groups under study.

4.2.1 LEVEL OF SIGNIFICANCE

The subjects were compared on the effect of yogic practices on selected physiological, hematological, psychological and performance related variables among college women cricket players. The analysis of covariance (ANCOVA) was used to find out the significant difference if any, between the groups on selected criterion variables separately. In all the cases, 0.05 level of confidence was fixed to test the significance, which was considered as appropriate.

4.3 COMPUTATION OF ANALYSIS OF COVARIANCE

The following tables illustrate the statistical results of effects due to yogic practices on selected physiological, hematological, psychological and performance related variables among college women cricket players.

4.3.1 RESULTS ON RESTING HEART RATE

The initial and final means on yogic practices group and control group on resting heart rate among college women cricket players and the obtained results on analysis of covariance (ANCOVA) is presented in Table III.

Table III

COMPUTATION OF ANALYSIS OF COVARIANCE ON RESTING HEART RATE

	Experimental group	Control	Source of variance	Sum of squares	df	Mean squares	Obtained f-ratio
Pre Test Mean	63.10	64.53	Between	30.82	1	30.82	0.73
			Within	2448.17	58	42.21	
Post Test Mean	59.57	64.97	Between	437.40	1	437.40	13.31*
			Within	1906.33	58	32.87	
Adjusted Post Test Mean	60.17	64.37	Between	261.00	1	261.00	81.16*
			Within	183.32	57	3.22	
Mean Difference	-3.53	0.43					

Table F-ratio at 0.05 level of confidence for 1 and 58 (df) =4.01, 1 and 57(df) =4.01 .

* Significant

The pre test mean on experimental group was 63.10, and control group was 64.53 and the obtained F value was 0.73, which was less than the required F value of 4.01 to be significant. Hence, it was not significant and the groups were equal at initial stage.

The comparison of post test means, experimental group 59.57 and control group 64.97 proved to be significant at 0.05 level as the obtained F value 13.31 was greater than the required table F value of 4.01 to be significant at 0.05 level.

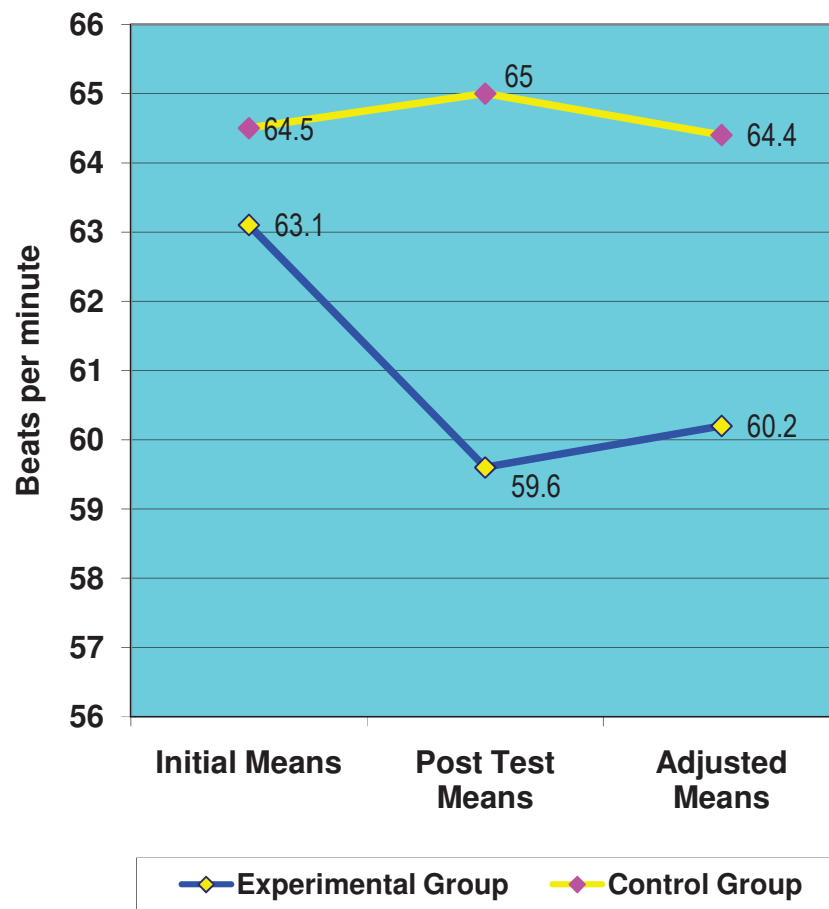
Taking into consideration the initial and final mean values adjusted post test means were calculated and the obtained F value of 81.16 was greater than the required F value to be significant 4.01 and hence, there was significant difference.

Thus, it was proved that experimental group gained mean difference on, resting heart rate -3.53 was due to yogic practices given to college women cricket players, and the difference was found to be significant at 0.05 level.

The initial, post and adjusted means values of experimental and control group on resting heart rate is presented in Figure 1 for better understanding of the results of this study.

Figure 1

Bar Diagram Showing Initial, Final and Adjusted Means on Resting Heart Rate of Experimental and Control Groups



4.3.1.2 DISCUSSIONS

The results presented in Table III proved that the resting heart rate has not been significantly improved among control group as they do not underwent yogic Practices. However, the six weeks yogic practices given to the experimental group significantly improved resting heart rate among college women cricket players. The statistical mean difference between initial test and final test of experimental group stood at -3.53 and control group stood at 0.43. The adjusted mean taking into consideration of initial and final means on resting heart rate among experimental group was 60.17 and control group was 64.37 and showed favorable effects on yogic practices group than control group. And the differences, statistically treated using ANCOVA, were found to be significant at 0.05 level as the obtained F value of 81.16 was greater than the required table F value of 4.01 to be significant at 0.05 level.

Thus, it was proved that yogic practices was significantly better than control group in favorably influencing resting hear rate of the college women cricket players. The findings of this study were in agreement with the findings of Lohan and Rajesh (2002) and Sharma (1995) who found improvement in blood pressure, resting heart rate, vital capacity and pulse rate due to yogic practices..

4.3.2 RESULTS ON BREATH HOLDING TIME

The initial and final means on yogic practices group and control group on breath holding time among college women cricket players and the obtained results on analysis of covariance (ANCOVA) is presented in Table IV.

Table IV
COMPUTATION OF ANALYSIS OF COVARIANCE ON BREATH HOLDING TIME

	Experimental group	Control	Source of variance	Sum of squares	df	Mean squares	Obtained f-ratio
Pre Test Mean	51.13	52.93	Between	48.60	1	48.60	1.09
			Within	2583.33	58	44.54	
Post Test Mean	56.67	52.97	Between	205.35	1	205.35	6.17*
			Within	1929.63	58	33.27	
Adjusted Post Test Mean	57.38	52.25	Between	388.20	1	388.20	76.80*
			Within	288.12	57	5.05	
Mean Difference	5.53	0.03					

Table F-ratio at 0.05 level of confidence for 1 and 58 (df) =4.01, 1 and 57(df) =4.01 .

* Significant

The pre test mean on experimental group was 51.13, and control group was 52.93 and the obtained F value was 1.09, which was less than the required F value of 4.01 to be significant. Hence, it was not significant and the groups were equal at initial stage.

The comparison of post test means, experimental group 56.67 and control group 52.97 proved to be significant at 0.05 level as the obtained F value 6.17 was greater than the required table F value of 4.01 to be significant at 0.05 level.

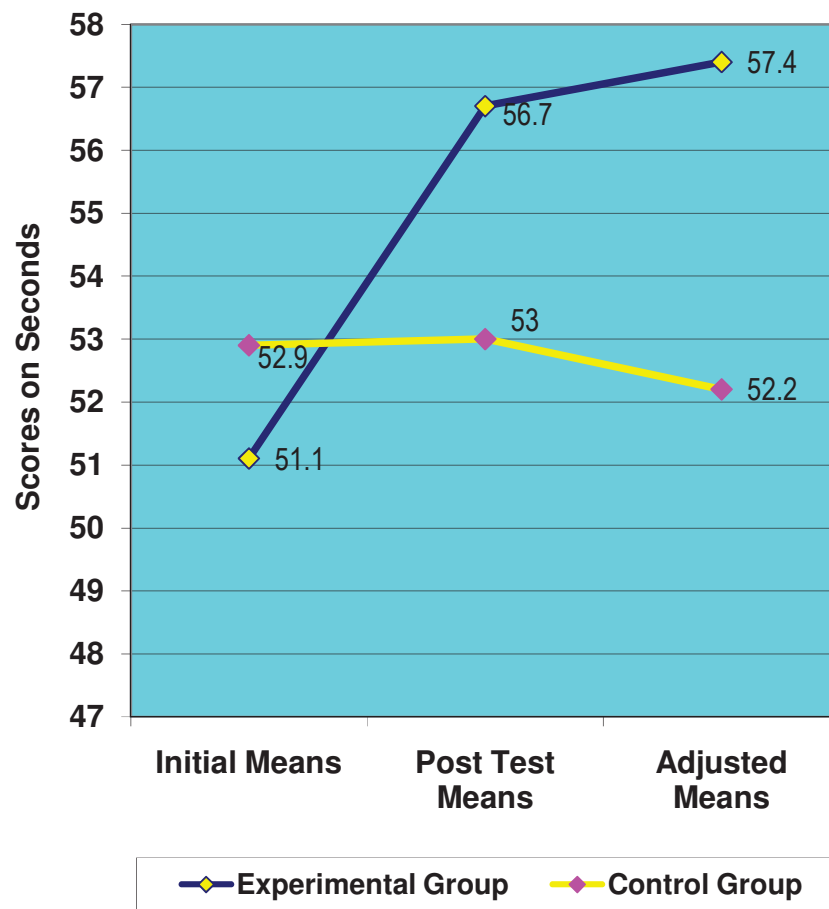
Taking into consideration the initial and final mean values adjusted post test means were calculated and the obtained F value of 76.80 was greater than the required F value to be significant 4.01 and hence, there was significant difference.

Thus, it was proved that experimental group gained mean difference on, breath holding time 5.53 was due to yogic practices given to college women cricket players, and the difference was found to be significant at 0.05 level.

The initial, post and adjusted means values of experimental and control group on breath holding time is presented in Figure 2 for better understanding of the results of this study.

Figure 2

Bar Diagram Showing Initial, Final and Adjusted Means on Breath Holding Time of Experimental and Control Groups



4.3.2.2 DISCUSSIONS

The results presented in Table IV proved that the breath holding time has not been significantly improved among control group as they do not underwent yogic practices. However, the six weeks yogic practices given to the experimental group significantly improved breath holding time among college women cricket players. The statistical mean difference between initial test and final test of experimental group stood at 5.53 and control group stood at 0.03. The adjusted mean taking into consideration of initial and final means on breath holding time among experimental group was 57.38 and control group was 52.25 and showed favorable effects on yogic practices group than control group. And the differences, statistically treated using ANCOVA, were found to be significant at 0.05 level as the obtained F value of 76.80 was greater than the required table F value of 4.01 to be significant at 0.05 level.

Thus, it was proved that yogic practices was significantly better than control group in favorably influencing breath holding time of the college women cricket players. The findings of this study were in agreement with the findings of Madanmohan et al.(1993) found yoga practice for 12 weeks results in change in breath holding time.

4.3.3 RESULTS ON MEAN ARTERIAL BLOOD PRESSURE

The initial and final means on yogic practices group and control group on mean arterial blood pressure among college women cricket players and the obtained results on analysis of covariance (ANCOVA) is presented in Table V

Table V
COMPUTATION OF ANALYSIS OF COVARIANCE ON MEAN ARTERIAL BLOOD PRESSURE

	Experimental group	Control	Source of variance	Sum of squares	df	Mean squares	Obtained f-ratio
Pre Test Mean	89.74	93.19	Between	177.96	1	177.96	5.53*
			Within	1865.41	58	32.16	
Post Test Mean	87.61	92.68	Between	385.07	1	385.07	12.41*
			Within	1799.68	58	31.03	
Adjusted Post Test Mean	88.84	91.45	Between	93.80	1	93.80	6.24*
			Within	856.39	57	15.02	
Mean Difference	-2.13	-0.51					

Table F-ratio at 0.05 level of confidence for 1 and 58 (df) =4.01, 1 and 57(df) =4.01 .

* Significant

The pre test mean on experimental group was 89.74, and control group was 93.19 and the obtained F value was 5.53, which was less than the required F value of 4.01 to be significant. Hence, it was not significant and the groups were equal at initial stage.

The comparison of post test means, experimental group 87.61 and control group 92.68 proved to be significant at 0.05 level as the obtained F value 12.41 was greater than the required table F value of 4.01 to be significant at 0.05 level.

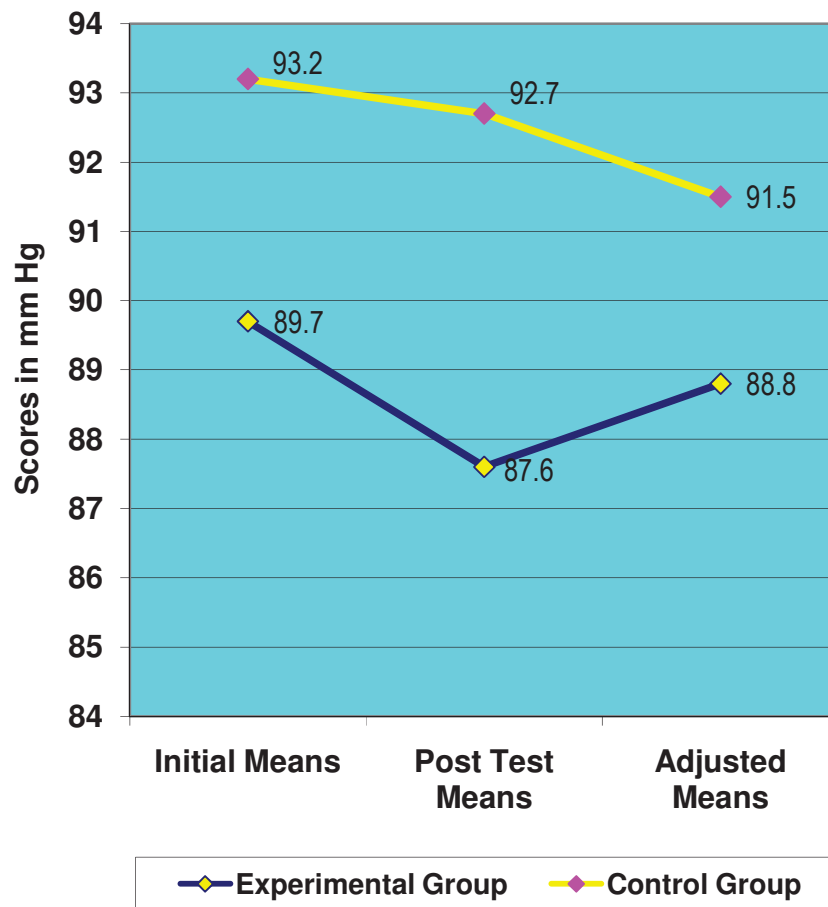
Taking into consideration the initial and final mean values adjusted post test means were calculated and the obtained F value of 6.24 was greater than the required F value to be significant 4.01 and hence, there was significant difference.

Thus, it was proved that experimental group gained mean difference on, mean arterial blood pressure -2.13 was due to yogic practices given to college women cricket players, and the difference was found to be significant at 0.05 level.

The initial, post and adjusted means values of experimental and control group on mean arterial blood pressure is presented in Figure 3 for better understanding of the results of this study.

Figure 3

Bar Diagram Showing Initial, Final and Adjusted Means on Mean Arterial Blood Pressure of Experimental and Control Groups



4.3.3.2 DISCUSSIONS

The results presented in Table V proved that the mean arterial blood pressure has not been significantly improved among control group as they do not underwent yogic practices. However, the six weeks yogic practices given to the experimental group significantly improved mean arterial blood pressure among college women cricket players. The statistical

mean difference between initial test and final test of experimental group stood at -2.13 and control group stood at -0.51. The adjusted mean taking into consideration of initial and final means on mean arterial blood pressure among experimental group was 88.84 and control group was 91.45 and showed favourable effects on yogic practices group than control group. And the differences, statistically treated using ANCOVA, were found to be significant at 0.05 level as the obtained F value of 6.24 was greater than the required table F value of 4.01 to be significant at 0.05 level.

Thus, it was proved that yogic practices was significantly better than control group in favorably influencing mean arterial blood pressure of the college women cricket players. The findings of this study were in agreement with the findings of [Monika](#), et.al. (2012) found significant positive effect was observed when yoga therapy was used on blood pressure and [Raub JA](#). (2002) who found that yoga can improve physiological variables as blood pressure, respiration and heart rate.

4.3.4 RESULTS ON RED BLOOD CELLS

The initial and final means on yogic practices group and control group on red blood cells among college women cricket players and the obtained results on analysis of covariance (ANCOVA) is presented in Table VI

Table VI

COMPUTATION OF ANALYSIS OF COVARIANCE ON RED BLOOD CELLS

	Experimental group	Control	Source of variance	Sum of squares	df	Mean squares	Obtained f-ratio
Pre Test Mean	5.16	5.34	Between	0.45	1	0.45	1.71
			Within	15.27	58	0.26	
Post Test Mean	5.93	5.40	Between	4.27	1	4.27	12.51*
			Within	19.79	58	0.34	
Adjusted Post Test Mean	6.02	5.31	Between	7.25	1	7.25	87.07*
			Within	4.75	57	0.08	
Mean Difference	0.77	0.06					

Table F-ratio at 0.05 level of confidence for 1 and 58 (df) =4.01, 1 and 57(df) =4.01 .

* Significant

The pre test mean on experimental group was 5.16, and control group was 5.34 and the obtained F value was 1.71, which was less than the required F value of 4.01 to be significant. Hence, it was not significant and the groups were equal at initial stage.

The comparison of post test means, experimental group 5.93 and control group 5.40 proved to be significant at 0.05 level as the obtained F value 12.51 was greater than the required table F value of 4.01 to be significant at 0.05 level.

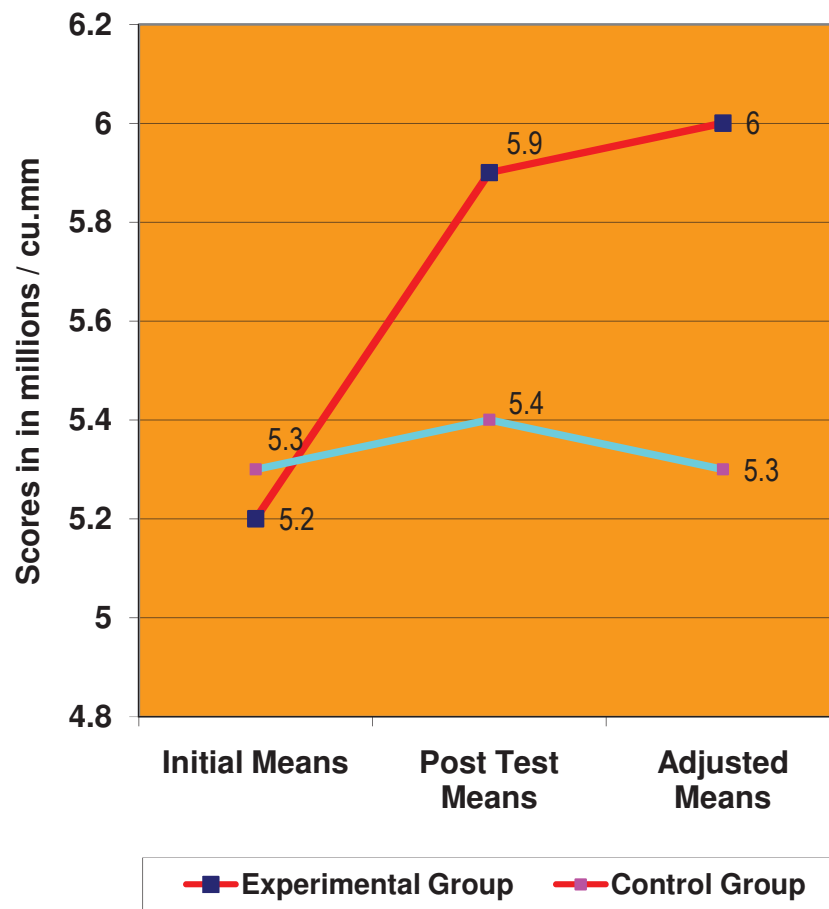
Taking into consideration the initial and final mean values adjusted post test means were calculated and the obtained F value of 87.07 was greater than the required F value to be significant 4.01 and hence, there was significant difference.

Thus, it was proved that experimental group gained mean difference on, red blood cells 0.77 was due to yogic practices given to college women cricket players, and the difference was found to be significant at 0.05 level.

The initial, post and adjusted means values of experimental and control group on red blood cells is presented in Figure 4 for better understanding of the results of this study.

Figure 4

Bar Diagram Showing Initial, Final and Adjusted Means on Red Blood Cells of Experimental and Control Groups



4.3.4.2 DISCUSSIONS

The results presented in Table VI proved that the red blood cells has not significantly improved among control group as they did not undergo yogic practices. However, the six weeks yogic practices given to the experimental group significantly improved red blood cells among college women cricket players. The statistical mean difference between initial test and final test of experimental group stood at 0.77 and control group stood at 0.06. The adjusted mean taking into consideration of initial and final means on red blood cells among experimental group was 6.02 and control group was 5.31 and showed favourable effects on yogic practices group than control group. And the differences, statistically treated using ANCOVA, were found to be significant at 0.05 level as the obtained F value of 87.07 was greater than the required table F value of 4.01 to be significant at 0.05 level.

Thus, it was proved that yogic practices was significantly better than control group in favourably influencing red blood cells of the college women cricket players. Bijlani RL, et.al. (2005) studied the short-term impact of a brief lifestyle intervention based on yoga on some of the biochemical indicators and found significant increase in HDL cholesterol significantly higher. Sharma (1995) found yogic practices increased hemoglobin. These increase impacted in significant alteration in red blood cells and the findings of this study were in agreement with the previous researches.

4.3.5 RESULTS ON WHITE BLOOD CELLS

The initial and final means on yogic practices group and control group on white blood cells among college women cricket players and the obtained results on analysis of covariance (ANCOVA) is presented in Table VII

Table VII

COMPUTATION OF ANALYSIS OF COVARIANCE ON WHITE BLOOD CELLS

	Experimental group	Control	Source of variance	Sum of squares	df	Mean squares	Obtained f-ratio
Pre Test Mean	8910.00	8783.33	Between	240666.67	1	240666.67	0.47
			Within	29708666.67	58	512218.39	
Post Test Mean	9183.33	8863.33	Between	1536000.00	1	1536000.00	3.12
			Within	28591333.33	58	492954.02	
Adjusted Post Test Mean	9124.91	8921.76	Between	614063.42	1	614063.42	10.58*
			Within	3308294.34	57	58040.25	
Mean Difference	273.33	80.00					

Table F-ratio at 0.05 level of confidence for 1 and 58 (df) =4.01, 1 and 57(df) =4.01 .

* Significant

The pre test mean on experimental group was 8910.00, and control group was 8783.33 and the obtained F value was 0.47, which was less than the required F value of 4.01 to be significant. Hence, it was not significant and the groups were equal at initial stage.

The comparison of post test means, experimental group 9183.33 and control group 8863.33 proved to be not significant at 0.05 level as the obtained F value 3.12 was lesser than the required table F value of 4.01 to be significant at 0.05 level.

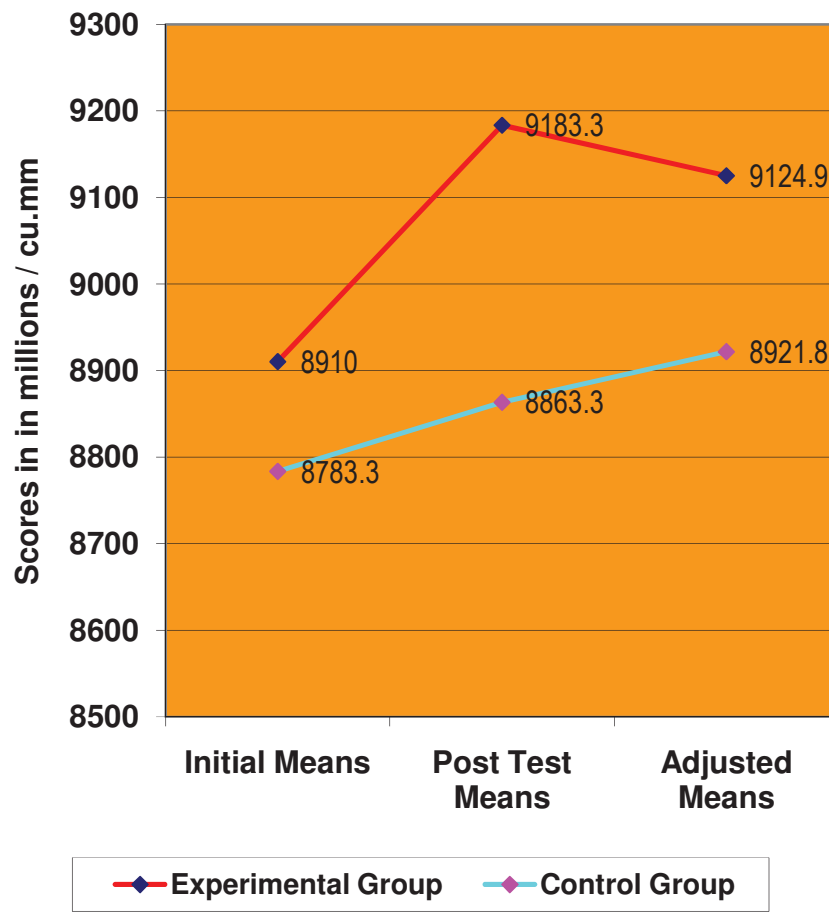
Taking into consideration the initial and final mean values adjusted post test means were calculated and the obtained F value of 10.58 was greater than the required F value to be significant 4.01 and hence, there was significant difference.

Thus, it was proved that experimental group gained mean difference on, white blood cells 273.33 was due to yogic practices given to college women cricket players, and the difference was found to be significant at 0.05 level.

The initial, post and adjusted means values of experimental and control group on white blood cells is presented in Figure 5 for better understanding of the results of this study.

Figure 5

Bar Diagram Showing Initial, Final and Adjusted Means on White Blood Cells of Experimental and Control Groups



4.3.5.2 DISCUSSIONS

The results presented in Table VII proved that the white blood cells has not been significantly improved among control group as they do not underwent yogic practices. However, the six weeks yogic practices given to the experimental group significantly improved white blood cells among college women cricket players. The statistical mean difference between initial test and final test of experimental group stood at 273.33 and control group stood at 80.00. The adjusted mean taking into consideration of initial and final means on white blood cells among experimental group was 9124.91 and control group was 8921.76 and showed favourable effects on yogic practices group than control group. And the differences, statistically treated using ANCOVA, were found to be significant at 0.05 level as the obtained F value of 10.58 was greater than the required table F value of 4.01 to be significant at 0.05 level.

Thus, it was proved that yogic practices was significantly better than control group in farourably influencing white blood cells of the college women cricket players. Bijlani RL, et.al. (2005) studied the short-term impact of a brief lifestyle intervention based on yoga on some of the biochemical indicators and found significant increase in HDL cholesterol significantly higher. Sharma (1995) found yogic practices increased hemoglobin. These increase impacted in significant alteration in white blood cells and the findings of this study were in agreement with the previous researches.

4.3.6 RESULTS ON HEMOGLOBIN

The initial and final means on yogic practices group and control group on hemoglobin among college women cricket players and the obtained results on analysis of covariance (ANCOVA) is presented in Table VIII.

Table VIII

COMPUTATION OF ANALYSIS OF COVARIANCE ON HEMOGLOBIN

	Experimental group	Control	Source of variance	Sum of squares	df	Mean squares	Obtained f-ratio
Pre Test Mean	14.62	14.66	Between	0.02	1	0.02	0.06
			Within	23.58	58	0.41	
Post Test Mean	15.97	14.81	Between	20.30	1	20.30	45.28*
			Within	26.01	58	0.45	
Adjusted Post Test Mean	15.99	14.79	Between	21.63	1	21.63	270.45*
			Within	4.56	57	0.08	
Mean Difference	1.35	0.15					

Table F-ratio at 0.05 level of confidence for 1 and 58 (df) =4.01, 1 and 57(df) =4.01 .

* Significant

The pre test mean on experimental group was 14.62, and control group was 14.66 and the obtained F value was 0.06, which was less than the required F value of 4.01 to be significant. Hence, it was not significant and the groups were equal at initial stage.

The comparison of post test means, experimental group 15.97 and control group 14.81 proved to be significant at 0.05 level as the obtained F value 45.28 was greater than the required table F value of 4.01 to be significant at 0.05 level.

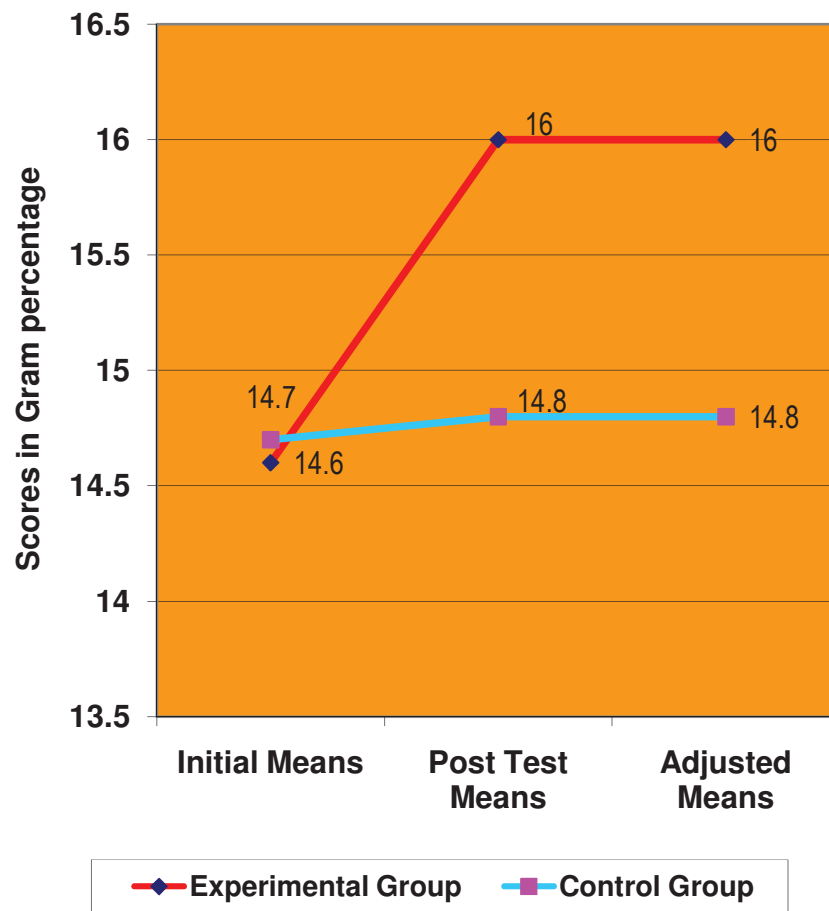
Taking into consideration the initial and final mean values adjusted post test means were calculated and the obtained F value of 270.45 was greater than the required F value to be significant 4.01 and hence, there was significant difference.

Thus, it was proved that experimental group gained mean difference on, hemoglobin 1.35 was due to yogic practices given to college women cricket players, and the difference was found to be significant at 0.05 level.

The initial, post and adjusted means values of experimental and control group on hemoglobin is presented in Figure 6 for better understanding of the results of this study.

Figure 6

Bar Diagram Showing Initial, Final and Adjusted Means on Hemoglobin of Experimental and Control Groups



4.3.6.2 DISCUSSIONS

The results presented in Table VIII proved that the hemoglobin has not been significantly improved among control group as they do not underwent yogic practices. however, the six weeks yogic practices given to the experimental group significantly improved hemoglobin among college women cricket players. The statistical mean difference between initial test and final test of experimental group stood at 1.35 and control group stood at 0.15. The adjusted mean taking into consideration of initial and final means on hemoglobin among experimental group was 15.99 and control group was 14.79 and showed favourable effects on yogic practices group than control group. And the differences, statistically treated using ANCOVA, were found to be significant at 0.05 level as the obtained F value of 270.45 was greater than the required table F value of 4.01 to be significant at 0.05 level.

Thus, it was proved that yogic practices was significantly better than control group in favourably influencing Hemoglobin of the college women cricket players. The findings of this study were in agreement with Sharma (1995) found increase in resting pulse rate, vital capacity, blood pressure, hemoglobin percentage.

4.3.7 RESULTS ON ANXIETY

The initial and final means on yogic practices group and control group on anxiety among college women cricket players and the obtained results on analysis of covariance (ANCOVA) is presented in Table IX

Table IX

COMPUTATION OF ANALYSIS OF COVARIANCE ON ANXIETY

	Experimental group	Control	Source of variance	Sum of squares	df	Mean squares	Obtained f-ratio
Pre Test Mean	55.30	56.50	Between	21.60	1	21.60	1.01
			Within	1235.80	58	21.31	
Post Test Mean	51.77	55.57	Between	216.60	1	216.60	10.99*
			Within	1142.73	58	19.70	
Adjusted Post Test Mean	52.27	55.06	Between	114.72	1	114.72	24.54*
			Within	266.50	57	4.68	
Mean Difference	-3.53	-0.93					

Table F-ratio at 0.05 level of confidence for 1 and 58 (df) =4.01, 1 and 57(df) =4.01 .

* Significant

The pre test mean on experimental group was 55.30, and control group was 56.50 and the obtained F value was 1.01, which was less than the required F value of 4.01 to be significant. Hence, it was not significant and the groups were equal at initial stage.

The comparison of post test means, experimental group 51.77 and control group 55.57 proved to be significant at 0.05 level as the obtained F value 10.99 was greater than the required table F value of 4.01 to be significant at 0.05 level.

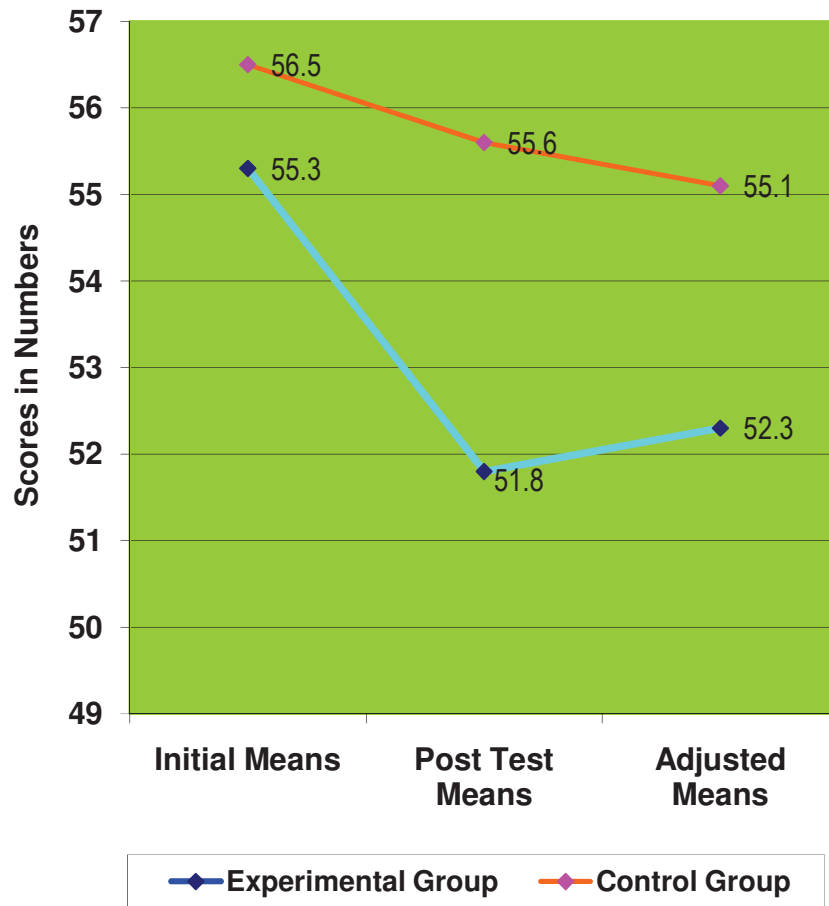
Taking into consideration the initial and final mean values adjusted post test means were calculated and the obtained F value of 24.54 was greater than the required F value to be significant 4.01 and hence, there was significant difference.

Thus, it was proved that experimental group gained mean difference on, anxiety - 3.53 was due to yogic practices given to college women cricket players, and the difference was found to be significant at 0.05 level.

The initial, post and adjusted means values of experimental and control group on anxiety is presented in Figure7 for better understanding of the results of this study.

Figure 7

Bar Diagram Showing Initial, Final and Adjusted Means on Anxiety of Experimental and Control Groups



4.3.7.2 DISCUSSIONS

The results presented in Table IX proved that the anxiety has not been significantly improved among control group as they do not underwent yogic practices. However, the six weeks yogic practices given to the experimental group significantly improved anxiety among college women cricket players. The statistical mean difference between initial test and final test of experimental group stood at -3.53 and control group stood at -0.93. The adjusted mean taking into consideration of initial and final means on anxiety among experimental group was 52.27 and control group was 55.06 and showed favourable effects on yogic practices group than control group. And the differences, statistically treated using ANCOVA, were found to be significant at 0.05 level as the obtained F value of 24.54 was greater than the required table F value of 4.01 to be significant at 0.05 level.

Thus, it was proved that yogic practices was significantly better than control group in favourably influencing anxiety of the college women cricket players. Sharma R, et.al. (2008) found yoga is assuming importance in improving mental health and quality of life, Gupta N, et.al. (2006) documented that considerable evidence exists for the place of mind body medicine in the treatment of anxiety disorders and found brief lifestyle intervention, based on yoga reduced anxiety.

4.3.8 RESULTS ON TEMPARAMENT

The initial and final means on yogic practices group and control group on temparament among college women cricket players and the obtained results on analysis of covariance (ANCOVA) is presented in Table X.

Table X

COMPUTATION OF ANALYSIS OF COVARIANCE ON TEMPARAMENT

	Experimental group	Control	Source of variance	Sum of squares	df	Mean squares	Obtained f-ratio
Pre Test Mean	22.13	21.50	Between	6.02	1	6.02	0.23
			Within	1526.97	58	26.33	
Post Test Mean	24.27	21.33	Between	129.07	1	129.07	6.54*
			Within	1144.53	58	19.73	
Adjusted Post Test Mean	24.01	21.59	Between	87.07	1	87.07	42.03*
			Within	118.10	57	2.07	
Mean Difference	2.13	-0.17					

Table F-ratio at 0.05 level of confidence for 1 and 58 (df) =4.01, 1 and 57(df) =4.01 .

* Significant

The pre test mean on experimental group was 22.13, and control group was 21.50 and the obtained F value was 0.23, which was less than the required F value of 4.01 to be significant. Hence, it was not significant and the groups were equal at initial stage.

The comparison of post test means, experimental group 24.27 and control group 21.33 proved to be significant at 0.05 level as the obtained F value 6.54 was greater than the required table F value of 4.01 to be significant at 0.05 level.

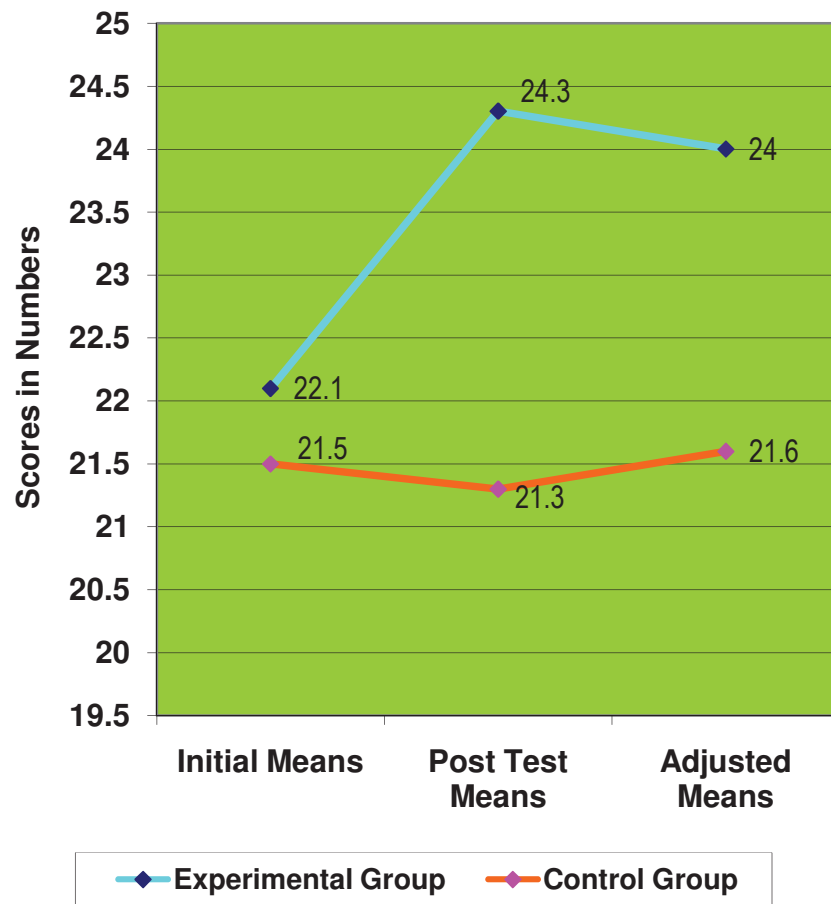
Taking into consideration the initial and final mean values adjusted post test means were calculated and the obtained F value of 42.03 was greater than the required F value to be significant 4.01 and hence, there was significant difference.

Thus, it was proved that experimental group gained mean difference on, temperament 2.13 was due to yogic practices given to college women cricket players, and the difference was found to be significant at 0.05 level.

The initial, post and adjusted means values of experimental and control group on temperament is presented in Figure 8 for better understanding of the results of this study.

Figure 8

Bar Diagram Showing Initial, Final and Adjusted Means on Temperament of Experimental and Control Groups



4.3.8.2 DISCUSSIONS

The results presented in Table X proved that the temperament has not been significantly improved among control group as they do not underwent yogic practices. However, the six weeks yogic practices given to the experimental group significantly improved temperament among college women cricket players. The statistical mean difference between initial test and final test of experimental group stood at 2.13 and control group stood at -0.17. The adjusted mean taking into consideration of initial and final means on temperament among experimental group was 24.01 and control group was 21.59 and showed favourable effects on yogic practices group than control group. And the differences, statistically treated using ANCOVA, were found to be significant at 0.05 level as the obtained F value of 42.03 was greater than the required table F value of 4.01 to be significant at 0.05 level.

Thus, it was proved that yogic practices was significantly better than control group in favourably influencing temperament of the college women cricket players. [Wolever RQ](#), et.al. (2012) documented yoga programs may provide viable and effective interventions to target high stress levels, sleep quality, and autonomic balance. [Khalsa SB](#), et.al. (2012) found yoga for adolescents significantly contributed for anger control and fatigue/inertia. Based on these theoretical foundations, the findings of this study that temperament can be significantly altered were in agreement with the previous researches.

4.3.9 RESULTS ON LOCUS OF CONTROL

The initial and final means on yogic practices group and control group on locus of control among college women cricket players and the obtained results on analysis of covariance (ANCOVA) is presented in Table XI.

Table XI

COMPUTATION OF ANALYSIS OF COVARIANCE ON LOCUS OF CONTROL

	Experimental group	Control	Source of variance	Sum of squares	df	Mean squares	Obtained f-ratio
Pre Test Mean	10.73	11.20	Between	3.27	1	3.27	0.93
			Within	202.67	58	3.49	
Post Test Mean	12.37	11.13	Between	22.82	1	22.82	9.42*
			Within	140.43	58	2.42	
Adjusted Post Test Mean	12.53	10.97	Between	35.64	1	35.64	45.22*
			Within	44.92	57	0.79	
Mean Difference	1.63	-0.07					

Table F-ratio at 0.05 level of confidence for 1 and 58 (df) =4.01, 1 and 57(df) =4.01 .

* Significant

The pre test mean on experimental group was 10.73, and control group was 11.20 and the obtained F value was 0.93, which was less than the required F value of 4.01 to be significant. Hence, it was not significant and the groups were equal at initial stage.

The comparison of post test means, experimental group 12.37 and control group 11.13 proved to be significant at 0.05 level as the obtained F value 9.42 was greater than the required table F value of 4.01 to be significant at 0.05 level.

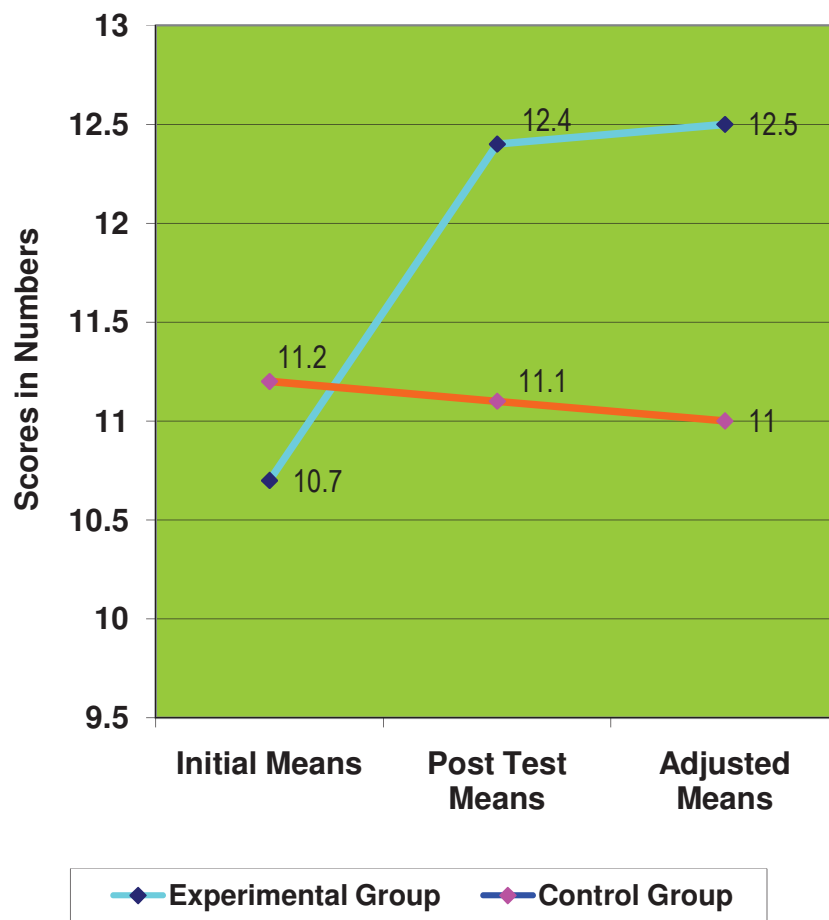
Taking into consideration the initial and final mean values adjusted post test means were calculated and the obtained F value of 45.22 was greater than the required F value to be significant 4.01 and hence, there was significant difference.

Thus, it was proved that experimental group gained mean difference on, locus of control 1.63 was due to yogic practices given to college women cricket players, and the difference was found to be significant at 0.05 level.

The initial, post and adjusted means values of experimental and control group on locus of control is presented in Figure 9 for better understanding of the results of this study.

Figure 9

Bar Diagram Showing Initial, Final and Adjusted Means on Locus of Control of Experimental and Control Groups



4.3.9.2 DISCUSSIONS

The results presented in Table XI proved that the locus of control has not been significantly improved among control group as they do not underwent yogic practices. However, the six weeks yogic practices given to the experimental group significantly improved locus of control among college women cricket players. The statistical mean difference between initial test and final test of experimental group stood at 1.63 and control group stood at -0.07. The adjusted mean taking into consideration of initial and final means on locus of control among experimental group was 12.53 and control group was 10.97 and showed favourable effects on yogic practices group than control group. And the differences, statistically treated using ANCOVA, were found to be significant at 0.05 level as the obtained F value of 45.22 was greater than the required table F value of 4.01 to be significant at 0.05 level.

Thus, it was proved that yogic practices was significantly better than control group in favourably influencing locus of control of the college women cricket players. [Evans S](#), et.al. (2011) documented self-efficacy, mood, acceptance and mindfulness through yogic practices. [Khalsa SB](#), et.al. (2012) found yoga for adolescents significantly contributed for anger control and fatigue/inertia. Based on these theoretical foundations, the findings of this study that locus of control can be significantly altered were in agreement with the previous researches cited.

4.3.10 RESULTS ON BATTING

The initial and final means on yogic practices group and control group on batting among college women cricket players and the obtained results on analysis of covariance (ANCOVA) is presented in Table XII.

Table XII

COMPUTATION OF ANALYSIS OF COVARIANCE ON BATTING

	Experimental group	Control	Source of variance	Sum of squares	df	Mean squares	Obtained f-ratio
Pre Test Mean	31.50	32.27	Between	8.82	1	8.82	0.43
			Within	1199.37	58	20.68	
Post Test Mean	33.67	31.63	Between	62.02	1	62.02	3.47
			Within	1037.63	58	17.89	
Adjusted Post Test Mean	34.00	31.30	Between	109.07	1	109.07	54.89*
			Within	113.25	57	1.99	
Mean Difference	2.17	-0.63					

Table F-ratio at 0.05 level of confidence for 1 and 58 (df) =4.01, 1 and 57(df) =4.01 .

* Significant

The pre test mean on experimental group was 31.50, and control group was 32.27 and the obtained F value was 0.43, which was less than the required F value of 4.01 to be significant. Hence, it was not significant and the groups were equal at initial stage.

The comparison of post test means, experimental group 33.67 and control group 31.63 proved to be not significant at 0.05 level as the obtained F value 3.47 was lesser than the required table F value of 4.01 to be significant at 0.05 level.

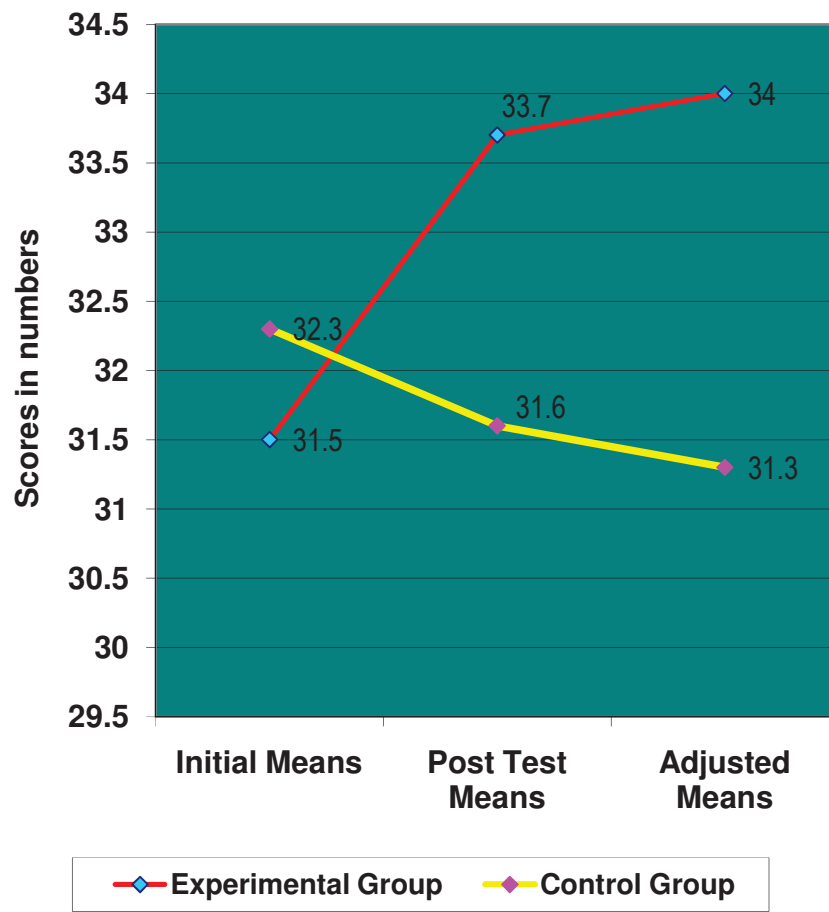
Taking into consideration the initial and final mean values adjusted post test means were calculated and the obtained F value of 54.89 was greater than the required F value to be significant 4.01 and hence, there was significant difference.

Thus, it was proved that experimental group gained mean difference on, Batting 2.17 was due to yogic practices given to college women cricket players, and the difference was found to be significant at 0.05 level.

The initial, post and adjusted means values of experimental and control group on batting is presented in Figure 10 for better understanding of the results of this study.

Figure 10

Bar Diagram Showing Initial, Final and Adjusted Means on Batting of Experimental and Control Groups



4.3.10.2 DISCUSSIONS

The results presented in Table XII proved that the batting has not been significantly improved among control group as they do not underwent yogic practices. However, the six weeks yogic practices given to the experimental group significantly improved batting among college women cricket players. The statistical mean difference between initial test and final test of experimental group stood at 2.17 and control group stood at -0.63. The adjusted mean taking into consideration of initial and final means on batting among experimental group was 34.00 and control group was 31.30 and showed favourable effects on yogic practices group than control group. And the differences, statistically treated using ANCOVA, were found to be significant at 0.05 level as the obtained F value of 54.89 was greater than the required table F value of 4.01 to be significant at 0.05 level.

Thus, it was proved that yogic practices was significantly better than control group in favourably influencing batting of the college women cricket players. Prakash S, et.al. (2007) determined that yoga and athletic activity (running) are associated with better lung functions as compared to subjects with sedentary lifestyles. Reddy and Kumar (2001) found yogasanas improved performance in each individual test item. In this study, based on these previous researches, the findings that batting performance improved were in agreement with these previous researches.

4.3.11 RESULTS ON BOWLING

The initial and final means on yogic practices group and control group on bowling among college women cricket players and the obtained results on analysis of covariance (ANCOVA) is presented in Table XIII.

Table XIII

COMPUTATION OF ANALYSIS OF COVARIANCE ON BOWLING

	Experimental group	Control	Source of variance	Sum of squares	df	Mean squares	Obtained f-ratio
Pre Test Mean	31.23	32.17	Between	13.07	1	13.07	0.61
			Within	1247.53	58	21.51	
Post Test Mean	33.40	31.83	Between	36.82	1	36.82	2.07
			Within	1029.37	58	17.75	
Adjusted Post Test Mean	33.81	31.42	Between	84.50	1	84.50	70.63*
			Within	68.19	57	1.20	
Mean Difference	2.17	-0.33					

Table F-ratio at 0.05 level of confidence for 1 and 58 (df) =4.01, 1 and 57(df) =4.01 .

* Significant

The pre test mean on experimental group was 31.23, and control group was 32.17 and the obtained F value was 0.61, which was less than the required F value of 4.01 to be significant. Hence, it was not significant and the groups were equal at initial stage.

The comparison of post test means, experimental group 33.40 and control group 31.83 proved to be not significant at 0.05 level as the obtained F value 2.07 was lesser than the required table F value of 4.01 to be significant at 0.05 level.

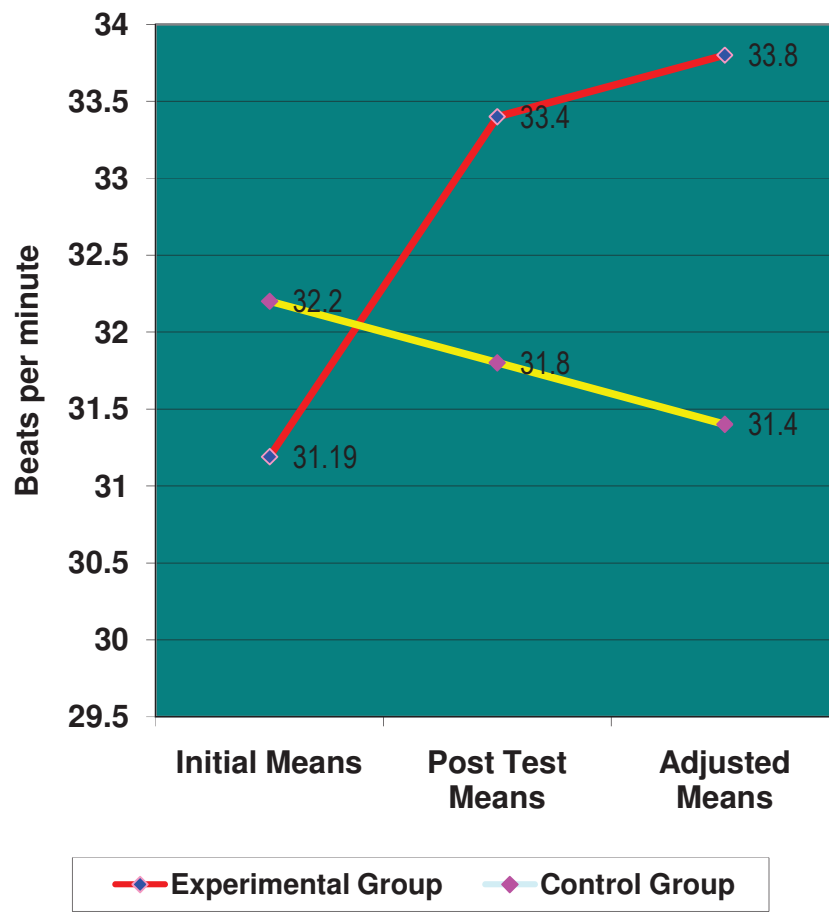
Taking into consideration the initial and final mean values adjusted post test means were calculated and the obtained F value of 70.63 was greater than the required F value to be significant 4.01 and hence, there was significant difference.

Thus, it was proved that experimental group gained mean difference on, Bowling 2.17 was due to yogic practices given to college women cricket players, and the difference was found to be significant at 0.05 level.

The initial, post and adjusted means values of experimental and control group on bowling is presented in Figure 11 for better understanding of the results of this study.

Figure 11

Bar Diagram Showing Initial, Final and Adjusted Means on Bowling of Experimental and Control Groups



4.3.11.2 DISCUSSIONS

The results presented in Table XIII proved that the bowling has not been significantly improved among control group as they do not undergo yogic practices. However, the six weeks yogic practices given to the experimental group significantly improved bowling among college women cricket players. The statistical mean difference between initial test and final test of experimental group stood at 2.17 and control group stood at -0.33. The adjusted mean taking into consideration of initial and final means on bowling among experimental group was 33.81 and control group was 31.42 and showed favourable effects on yogic practices group than control group. And the differences, statistically treated using ANCOVA, were found to be significant at 0.05 level as the obtained F value of 70.63 was greater than the required table F value of 4.01 to be significant at 0.05 level.

Thus, it was proved that yogic practices was significantly better than control group in favourably influencing bowling of the college women cricket players. Prakash S, et.al. (2007) determined that yoga and athletic activity (running) are associated with better lung functions as compared to subjects with sedentary lifestyles. Reddy and Kumar (2001) found yogasanas improved performance in each individual test item. In this study, based on these previous researches, the findings that bowling performance improved in agreement with these previous researches.

4.3.12 RESULTS ON FIELDING

The initial and final means on yogic practices group and control group on fielding among college women cricket players and the obtained results on analysis of covariance (ANCOVA) is presented in Table XIV.

Table XIV

COMPUTATION OF ANALYSIS OF COVARIANCE ON FIELDING

	Experimental group	Control	Source of variance	Sum of squares	df	Mean squares	Obtained f-ratio
Pre Test Mean	35.23	36.17	Between	13.07	1	13.07	0.61
			Within	1247.53	58	21.51	
Post Test Mean	38.40	35.83	Between	98.82	1	98.82	5.57*
			Within	1029.37	58	17.75	
Adjusted Post Test Mean	38.81	35.42	Between	170.18	1	170.18	142.25*
			Within	68.19	57	1.20	
Mean Difference	3.17	-0.33					

Table F-ratio at 0.05 level of confidence for 1 and 58 (df) =4.01, 1 and 57(df) =4.01 .

* Significant

The pre test mean on experimental group was 35.23, and control group was 36.17 and the obtained F value was 0.61, which was less than the required F value of 4.01 to be significant. Hence, it was not significant and the groups were equal at initial stage.

The comparison of post test means, experimental group 38.40 and control group 35.83 proved to be significant at 0.05 level as the obtained F value 5.57 was greater than the required table F value of 4.01 to be significant at 0.05 level.

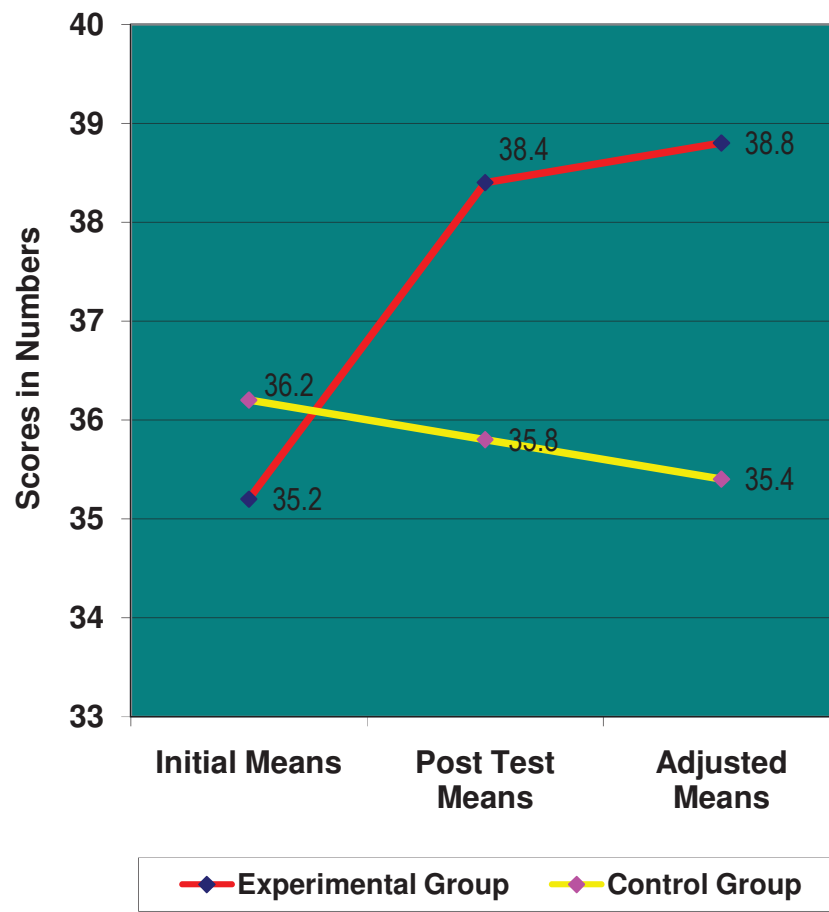
Taking into consideration the initial and final mean values adjusted post test means were calculated and the obtained F value of 142.25 was greater than the required F value to be significant 4.01 and hence, there was significant difference.

Thus, it was proved that experimental group gained mean difference on, fielding 3.17 was due to yogic practices given to college women cricket players, and the difference was found to be significant at 0.05 level.

The initial, post and adjusted means values of experimental and control group on Fielding is presented in Figure 12 for better understanding of the results of this study.

Figure 12

Bar Diagram Showing Initial, Final and Adjusted Means on Fielding of Experimental and Control Groups



4.3.12.2 DISCUSSIONS

The results presented in Table XIV proved that the fielding has not been significantly improved among control group as they do not underwent yogic practices. However, the six weeks yogic practices given to the experimental group significantly improved fielding among college women cricket players. The statistical mean difference between initial test and final test of experimental group stood at 3.17 and control group stood at -0.33. The adjusted mean taking into consideration of initial and final means on fielding among experimental group was 38.81 and control group was 35.42 and showed favourable effects on yogic practices group than control group. And the differences, statistically treated using ANCOVA, were found to be significant at 0.05 level as the obtained F value of 142.25 was greater than the required table F value of 4.01 to be significant at 0.05 level.

Thus, it was proved that yogic practices was significantly better than control group in favourably influencing fielding of the college women cricket players. Prakash S, et.al. (2007) determined that yoga and athletic activity (running) are associated with better lung functions as compared to subjects with sedentary lifestyles. Reddy and Kumar (2001) found yogasanas improved performance in each individual test item. In this study, based on these previous researches, the findings that fielding performance improved were in agreement with these previous researches.

4.4 DISCUSSIONS ON HYPOTHESIS

In the earlier, the researcher had formulated hypothesis that there would be significant improvement due to yogic practices on selected physiological variables, resting heart rate, breath holding time and mean arterial blood pressure among women cricket players. The results presented in Table III proved that yogic practices significantly reduced resting heart rate than control group, Table IV proved that yogic practices increased breath holding time than control group, and Table V proved that mean arterial blood pressure was reduced by yogic practices than control group hence the hypothesis was accepted at 0.05 level.

The formulated hypothesis second stated that there would be significant improvement due to yogic practices on selected hematological variables, red blood cells, white blood cells and hemoglobin among women cricket players. The results presented in Table VI proved that yogic practices improved red blood cells than control group, Table VII proved that yogic practices improved white blood cells than control group and Table VIII proved that yogic practices improved hemoglobin than control group and the improvements were significant at 0.05 level hence, the hypothesis was accepted at 0.05 level..

The formulated hypothesis third stated that there would be significant improvement due to yogic practices on selected psychological variables, anxiety, temperament and locus of control among women cricket players. The results presented in Table IX proved that yogic practices reduced anxiety than control group, Table X proved that yogic practices improved temperament than control group and Table XI proved that yogic practices

improved locus of control than control group. The differences were significant as the obtained F values were greater than the required table F value to be significant at 0.05 level and the hypothesis was accepted at 0.05 level.

The fourth formulated hypothesis stated that there would be significant improvement due to yogic practices on selected performance related variables, batting, bowling and fielding among women cricket players. The results presented in Table XII proved that yogic practices improved batting performance than control group, Table XIII proved that yogic practices improved bowling performance than control group and Table XIV proved that yogic practices improved fielding performance than control group and the differences were significant as the obtained F values were greater than the required table F value to be significant at 0.05 level and the hypothesis was accepted at 0.05 level..