

Chapter IV

CHAPTER IV

ANALYSIS AND INTERPRETATION OF DATA

This chapter deals with the analysis of data collected from samples under study. The two groups namely simplified Kundalini yoga group and control groups were analyzed for the differences in their measures of psychological, hematological, and sociological variables in relation to pre-test, post-test and adjusted post test scores. To achieve the purpose, 80 software engineers were randomly selected from Coimbatore district. Their age ranged between 30 and 35 years. The selected subjects were randomly divided into two equal groups consisting of forty each. Experimental Group I underwent Simplified Kundalini Yoga training (SKY); Experimental Group II acted as control group (CG) selected as subjects at random. The selected subjects were initially tested on criterion variables used in this study and it was considered as pre-test. After the pre-test, the subjects in the experimental group I were treated with simplified Kundalini yoga for six days a week both morning and evening session as one hour each, for a duration of 24 weeks.

The group mean gains pre and post test recorded by two groups during the experimental period of 24 weeks to the criterion measures were tested for significance by applying 't' test. The statistical tool of analysis of variance [ANOVA] was applied to determine whether the training produced significant improvement in selected variables after 24 weeks of training.

4.1. TEST OF SIGNIFICANCE

This is the crucial portion of the thesis in arriving at conclusions by examining the hypothesis. The procedure of accepting the hypothesis or rejecting the hypothesis in accordance with the results obtained in relation to the level of significance was considered sufficient for the study. The level of significance was fixed at 0.05 levels for all the variables.

The test was usually called the test of significance, since the investigator tests whether the difference between base line and post test was significant or not. If the obtained F- ratio was less than the table F- ratio, at $P < 0.05$ level for all the variables, then

the hypothesis was rejected to the effect that there existed no significant difference among the groups.

4.2 LEVEL OF SIGNIFICANCE

To test the obtained results on all the selected variables, 0.05 level of significance was chosen and considered as sufficient for the study.

4.3 COMPUTATION OF T TEST

The primary objective of the paired 't' ratio was to describe the differences between the pre-test and post-test mean of middle aged men.

Thus the obtained results were interpreted with earlier studies and presented in this chapter well along with graphical presentations.

TABLE - 3
SIGNIFICANCE OF MEAN GAINS & LOSSES BETWEEN PRE AND POST TEST SCORES ON SELECTED VARIABLES OF SIMPLIFIED KUNDALINI YOGA GROUP

S.No	Variables	Mean		Mean difference	SD (\pm)		't' Ratio
		Pre	Post		Pre	Post	
1.	Occupational stress	160	49	111	18	21	22.93*
2.	Job satisfaction	78	20	58	16	16	15.45*
3.	Immunity	6106	9532	3426	1432	544	16.11*
4.	Cholesterol	239	180	59	22	29	10.12*
5.	Social values	116	292	176	47	61	13.74*
6.	Emotional intelligence	49	84	35	24	12	8.03*

* Significant at 0.05 level for the table value 2.023 for degrees of freedom 39.

An examination of table - 3 indicates that the obtained t ratios were 22.93, 15.45, 16.11, 10.12, 13.74 and 8.03 for the variables Occupational Stress, Job Satisfaction, Immunity, Cholesterol, Social Values, and Emotional Intelligence respectively.

The obtained t-ratios on the selected variables were found to be greater than the required table value of 2.023 at 0.05 level of significance. So it is found to be significant. The results of this study showed that statistically significant and explained its effects positively.

TABLE – 4

SIGNIFICANCE OF MEAN GAINS & LOSSES BETWEEN PRE AND POST TEST SCORES ON SELECTED VARIABLES OF CONTROL GROUP

S.No	Variables	Mean		Mean difference	SD (±)		't' Ratio
		Pre	Post		Pre	Post	
1	Occupational Stress	159	159	0	25	21	0.87
2	Job Satisfaction	78	79	1	19	15	0.259
3	Immunity	6035	6033	2	1694	1700	0.004
4	Cholesterol	240	240	0	22	21	0.006
5	Social Values	115	115	0	51	53	0.048
6	Emotional Intelligence	50	49	1	24	23	0.114

* Significant at 0.05 level with the table value 2.023 for degrees of freedom 39

An examination of table - 4 indicates that the obtained t ratios were 0.87, 0.259, 0.004, 0.006, 0.048 and 0.114 for the variables Occupational Stress, Job Satisfaction, Immunity, Cholesterol, Social Values, and Emotional Intelligence respectively. The obtained t-ratios on the selected variables were found to be lesser than the required table value of 2.023 at 0.05 level of significance. So it is found to be insignificant. The results of this study showed that statistically significant and explained its effects positively.

TABLE – 5

**COMPUTATION OF ANALYSIS OF VARIANCE ON PRE, POST AND ADJUSTED
POST-TEST MEANS OF THE SELECTED VARIABLES OF SIMPLIFIED
KUNDALINI YOGA GROUP (SKYG) AND CONTROL GROUP (CG) ON
OCCUPATIONAL STRESS**

	SKYG	CG	Source of Variance	Sum of Squares	df	Means Squares	F-ratio
Pre-Test Means	160	159	BG	242313	1	242313	507.16*
Post-Test Means	49	159	WG	36789	77	477	
Adjusted Post-Test Means	49	159	Total	279484	79		

BG- Between Group Means

* - Significant

WG- Within Group Means (Table Value for 0.05 Level for df 1, 77 & 79 = 3.965)

df- Degrees of Freedom

4.4. RESULTS OF OCCUPATIONAL STRESS

An examination of table - 5 indicated that the pretest means of simplified Kundalini yoga group and control groups were 160 and 159 respectively. The post-test means of simplified Kundalini yoga group and control groups were 49 and 159 respectively. The adjusted post-test means of the simplified Kundalini yoga group and control groups were 49 and 159 respectively. The obtained 'F' ratio for cholesterol was 507.16 which are found to be greater than the required table value of 3.965 for the degrees of freedom 1, 77 and 79; it was found to be significant at 0.05 level of confidence.

The researcher has achieved similar results like Wolever (2012) who studied the effective therapeutic yoga on mind and body stress in work place and found it to be an effective intervention.

The pre, post and adjusted posttest mean values of simplified Kundalini yoga group and control group on Occupational Stress are graphically represented in the figure -1.

FIGURE 1

BAR DIAGRAM SHOWING THE ADJUSTED MEAN VALUES OF OCCUPATIONAL STRESS OF CONTROL GROUP AND SIMPLIFIED KUNDALINI YOGA GROUP

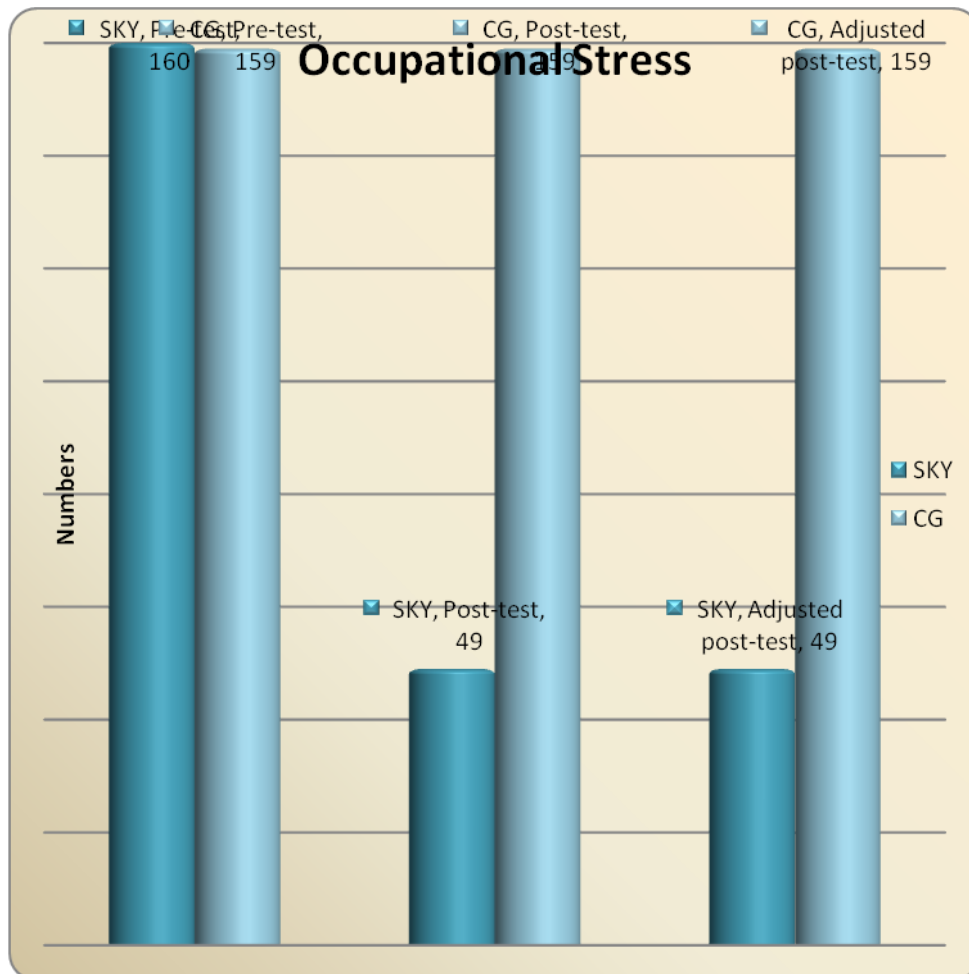


TABLE – 6

COMPUTATION OF ANALYSIS OF VARIANCE ON PRE, POST AND ADJUSTED POST-TEST MEANS OF THE SELECTED VARIABLES OF SIMPLIFIED KUNDALINI YOGA GROUP (SKYG) AND CONTROL GROUP (CG) ON JOB SATISFACTION

	SKYG	CG	Source of Variance	Sum of Squares	df	Means Squares	F-ratio
Pre-Test Means	78	78	BG	70271	1	70271	267.7*
Post-Test Means	19	79	WG	20212	77	262	
Adjusted Post-Test Means	19	79	Total	90483	79		

BG- Between Group Means

* - Significant

WG- Within Group Means (Table Value for 0.05 Level for df 1, 77 & 79 = 3.965)

df- Degrees of Freedom

4.5. RESULTS OF JOB SATISFACTION

An examination of table - 6 indicated that the pretest means of simplified Kundalini yoga group and control groups were 78 and 78 respectively. The post-test means of simplified Kundalini yoga group and control groups were 19 and 79 respectively. The adjusted post-test means of the simplified Kundalini yoga group and control groups were 19 and 79 respectively. The obtained 'F' ratio for cholesterol was 267.7 which are found to be greater than the required table value of 3.965 for the degrees of freedom 1, 77 and 79; it was found to be significant at 0.05 level of confidence.

The results are in par with the results of Shaly (2015). She concludes that introducing Yoga practices regularly in the industry for the benefit of the organization and individual employees

The pre, post and adjusted posttest mean values of simplified Kundalini yoga group and control group on Job Satisfaction are graphically represented in the figure - 2.

FIGURE 2

BAR DIAGRAM SHOWING THE ADJUSTED MEAN VALUES OF JOB SATISFACTION OF CONTROL GROUP AND SIMPLIFIED KUNDALINI YOGA GROUP

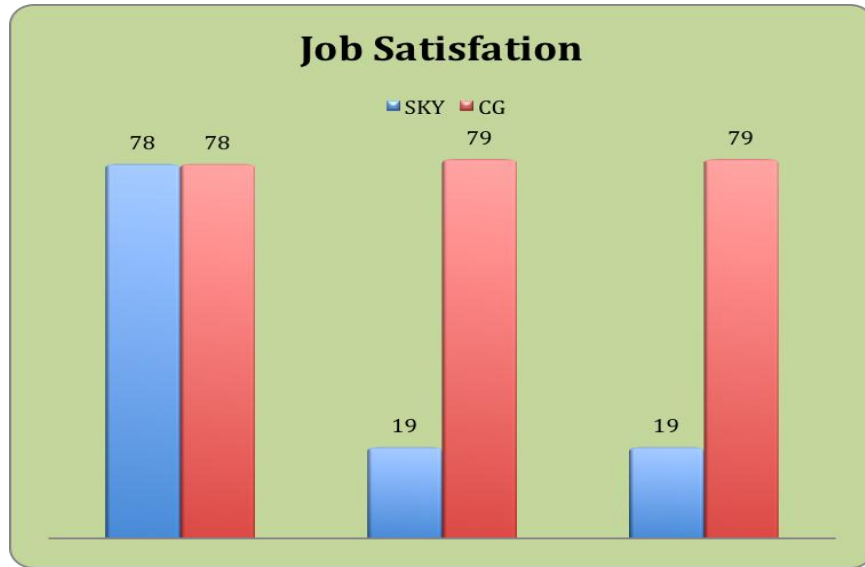


TABLE – 7

COMPUTATION OF ANALYSIS OF VARIANCE ON PRE, POST AND ADJUSTED POST-TEST MEANS OF THE SELECTED VARIABLES OF SIMPLIFIED KUNDALINI YOGA GROUP (SKYG) AND CONTROL GROUP (CG) ON IMMUNITY

	SKYG	CG	Source of Variance	Sum of Squares	df	Means Squares	F-ratio
Pre-Test Means	6106	6035	BG	243408399	1	243408399	154.688*
Post-Test Means	9532	6033	WG	121162770	77	243408399	
Adjusted Post-Test Means	9527	6038	Total	369199718	79		

BG - Between Group Means

* - Significant

WG- Within Group Means (Table Value for 0.05 level for df 1, 77 & 79 = 3.965)

df - Degrees of Freedom

4.6. RESULTS OF IMMUNITY

An examination of table - 7 indicated that the pretest means of simplified Kundalini yoga group and control groups were 6106 and 6035 respectively. The post-test means of simplified Kundalini yoga group and control groups were 9532 and 6033 respectively. The adjusted post-test means of the simplified Kundalini yoga group and control groups were 9527 and 6038 respectively. The obtained 'F' ratio for Immunity is 154.68 which are found to be greater than the required table value of 3.965 for the degrees of freedom 1, 77 and 79; it was found to be significant at 0.05 level of confidence.

The results of the study are in par with the results of Juan (2004)

The pre, post and adjusted posttest mean values of simplified Kundalini yoga group and control groups' immunity are graphically represented in the figure -3.

FIGURE 3

BAR DIAGRAM SHOWING THE ADJUSTED MEAN VALUES OF IMMUNITY OF CONTROL GROUP AND SIMPLIFIED KUNDALINI YOGA GROUP

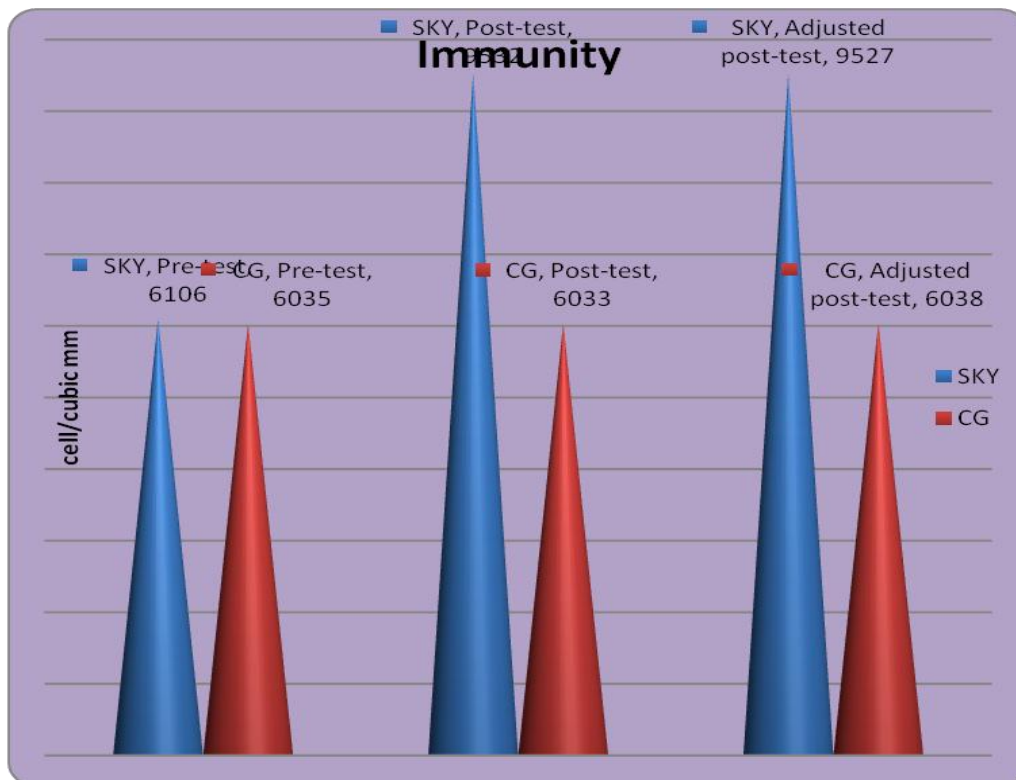


TABLE – 8

COMPUTATION OF ANALYSIS OF VARIANCE ON PRE, POST AND ADJUSTED POST-TEST MEANS OF THE SELECTED VARIABLES OF SIMPLIFIED KUNDALINI YOGA GROUP (SKYG) AND CONTROL GROUP (CG) ON CHOLESTEROL

	SKYG	CG	Source of Variance	Sum of Squares	df	Means Squares	F-ratio
Pre-Test Means	239	240	BG	71775	1	71775	108.27*
Post-Test Means	180	240	WG	51042	77	662	
Adjusted Post-Test Means	180	240	Total	123286	79		

BG- Between Group Means

* - Significant

WG- Within Group Means (Table Value for 0.05 Level for df 1, 77 & 79 = 3.965)

df- Degrees of Freedom

4.7. RESULTS OF CHOLESTEROL

An examination of table - 8 indicated that the pretest means of simplified Kundalini yoga group and control groups were 239 and 240 respectively. The post-test means of simplified Kundalini yoga group and control groups were 180 and 240 respectively. The adjusted post-test means of the simplified Kundalini yoga group and control groups were 180 and 240 respectively. The obtained 'F' ratio for cholesterol was 108.27 which are found to be greater than the required table value of 3.965 for the degrees of freedom 1, 77 and 79; it was found to be significant at 0.05 level of confidence.

The results of the study are similar to the results of Begum (2013) who studied the effect of asanas, pranayama and relaxation techniques on 30 men aged between 40 and 60 years and found to be significant.

The pre, post and adjusted posttest mean values of simplified Kundalini yoga group and control group on Cholesterol are graphically represented in the figure - 4.

FIGURE 4

BAR DIAGRAM SHOWING THE ADJUSTED MEAN VALUES OF CHOLESTEROL OF CONTROL GROUP AND SIMPLIFIED KUNDALINI YOGA GROUP

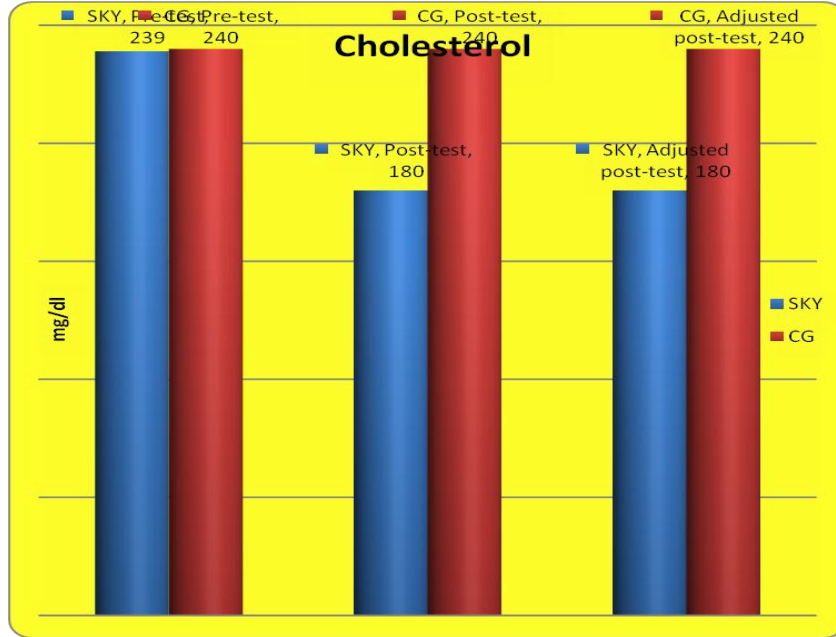


TABLE – 9

COMPUTATION OF ANALYSIS OF VARIANCE ON PRE, POST AND ADJUSTED POST-TEST MEANS OF THE SELECTED VARIABLES OF SIMPLIFIED KUNDALINI YOGA GROUP (SKYG) AND CONTROL GROUP (CG) ON SOCIAL VALUES

	SKYG	CG	Source of Variance	Sum of Squares	df	Means Squares	F-ratio
Pre-Test Means	115	115	BG	618737	1	618737	187.9*
Post-Test Means	291	115	WG	253529	77	3292	
Adjusted Post-Test Means	291	115	Total	874471	79		

BG- Between Group Means

* - Significant

WG- Within Group Means (Table Value for 0.05 Level for df 1, 77 & 79 = 3.965)

df- Degrees of Freedom

4.8. RESULTS OF SOCIAL VALUES

An examination of table - 9 indicated that the pretest means of simplified Kundalini yoga group and control groups were 115 and 115 respectively. The post-test means of simplified Kundalini yoga group and control groups were 291 and 115 respectively. The adjusted post-test means of the simplified Kundalini yoga group and control groups were 291 and 115 respectively. The obtained 'F' ratio for cholesterol was 187.9 which are found to be greater than the required table value of 3.965 for the degrees of freedom 1, 77 and 79; it was found to be significant at 0.05 level of confidence.

The results are similar to the effects Suchitra (2014).

The pre, post and adjusted posttest mean values of simplified Kundalini yoga group and control group on Social values are graphically represented in the figure - 5.

FIGURE - 5

BAR DIAGRAM SHOWING THE ADJUSTED MEAN VALUES OF SOCIAL VALUES OF CONTROL GROUP AND SIMPLIFIED KUNDALINI YOGA GROUP

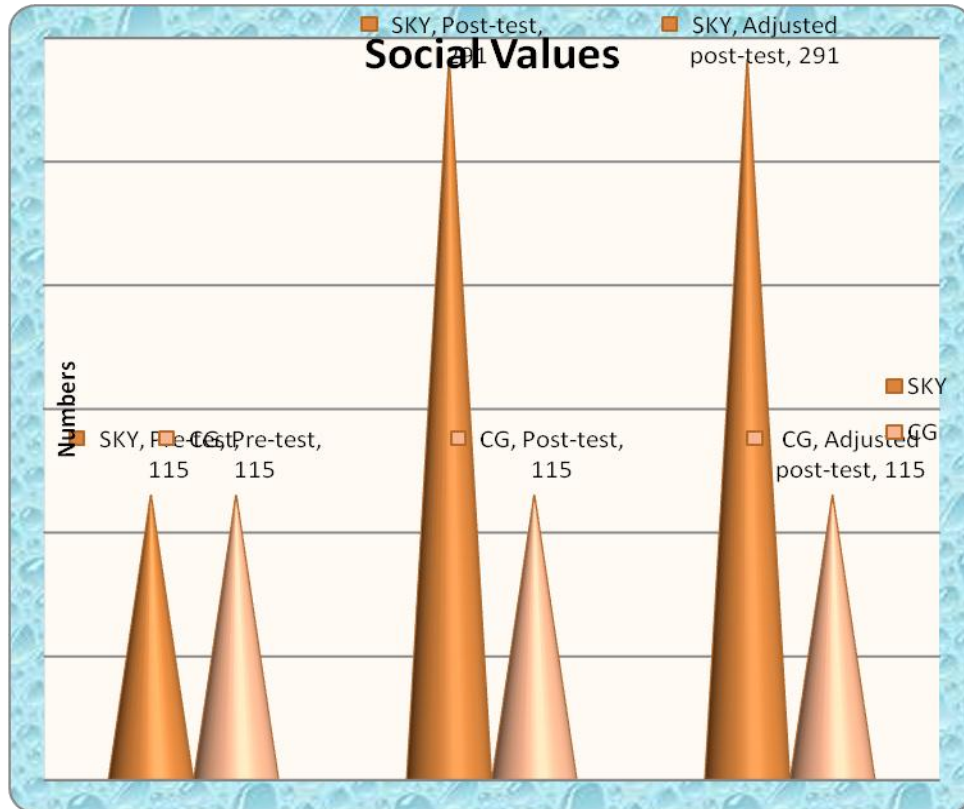


TABLE – 10

COMPUTATION OF ANALYSIS OF VARIANCE ON PRE, POST AND ADJUSTED POST-TEST MEANS OF THE SELECTED VARIABLES OF SIMPLIFIED KUNDALINI YOGA GROUP (SKYG) AND CONTROL GROUP (CG) ON EMOTIONAL INTELLIGENCE

	SKYG	CG	Source of Variance	Sum of Squares	df	Means Squares	F-ratio
Pre-Test Means	49	50	BG	23179	1	23179	67.24*
Post-Test Means	84	49	WG	26542	77	26542	
Adjusted Post-Test Means	84	50	Total	50645	79		

BG- Between Group Means

* - Significant

WG- Within Group Means (Table Value for 0.05 Level for df 1, 77 & 79 = 3.965)

df- Degrees of Freedom

4.9. RESULTS OF EMOTIONAL INTELLIGENCE

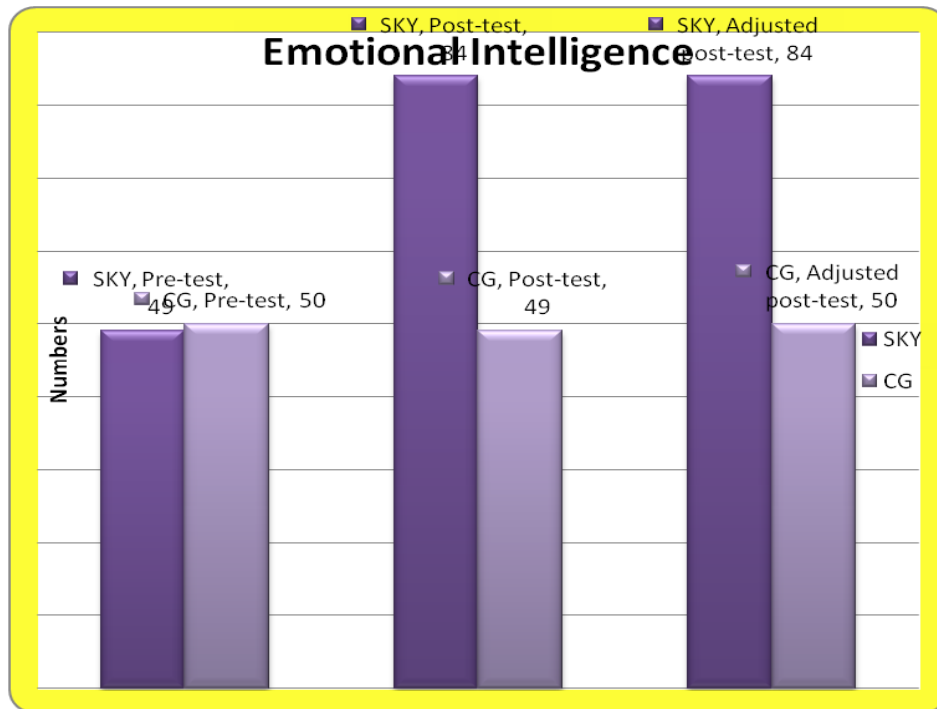
An examination of table - 10 indicated that the pretest means of simplified Kundalini yoga group and control groups were 49 and 50 respectively. The post-test means of simplified Kundalini yoga group and control groups were 84 and 49 respectively. The adjusted post-test means of the simplified Kundalini yoga group and control groups were 84 and 50 respectively. The obtained 'F' ratio for cholesterol was 67.24 which are found to be greater than the required table value of 3.965 for the degrees of freedom 1, 77 and 79; it was found to be significant at 0.05 level of confidence.

The results are in par with the results achieved by Sushil (2011) who tested emotional intelligence of 17-63 years population with a one month yoga routine.

The pre, post and adjusted posttest mean values of simplified Kundalini yoga group and control group on Emotional Intelligence are graphically represented in the figure - 6.

FIGURE 6

BAR DIAGRAM SHOWING THE ADJUSTED MEAN VALUES OF EMOTIONAL INTELLIGENCE OF CONTROL GROUP AND SIMPLIFIED KUNDALINI YOGA GROUP



4.10. DISCUSSION ON FINDINGS

The results of the findings were discussed under the following pertinent areas namely simplified Kundalini yoga group and Control group.

The results of the present study indicates that the training program of Simplified Kundalini was an effective method to improve the selected variables such as Occupational Stress, Job Satisfaction, Immunity, Cholesterol, Social Values and Emotional Intelligence due to 24 weeks of systematic simplified Kundalini Yoga Training.

4.11. SELECTED VARIABLES:

In the present study, Simplified Kundalini Yoga had improved Occupational Stress, Job Satisfaction, Immunity, Cholesterol, Social Values and Emotional Intelligence by finding significant differences in comparison between base line and post test.

However there were no statistically significant changes in Occupational Stress, Job Satisfaction, Immunity, Cholesterol, Social Values and Emotional Intelligence of Control Group.

In the context of the present trend, the rational use of Simplified Kundalini Yoga is essential to improve the selected variables. Yoga complements the students to develop their fitness and wellness within the available time. The consistency in determining the significant contribution of simplified Kundalini yoga on developing the selected variables in this study was similar to the findings of other studies using yoga.

This study supports the findings of Bethany (2014), Sang (2014), Bland (2014), Huang (2013), Wolever (2012), Ned (2012), Nicholas (2011) and Vempati (2000).

4.12. DISCUSSION ON HYPOTHESES

1. First hypothesis is stated that there may not be a significant difference in the development of the selected hematological psychological and sociological variables among the middle aged men of control group from their baseline to post test.

The findings of the study showed that there were no significant differences in selected hematological, psychological and sociological variables of middle aged men from their baseline to post treatment due to because the control group did not undergo any special training. Hence the first hypothesis was accepted.

2. The second hypothesis stated that there may not be a significant difference in the development of the selected hematological psychological and sociological variables among the middle aged men due to Simplified Kundalini yoga practices from their baseline to post treatment.

The findings of the study showed that there were significant differences in selected hematological, psychological and sociological variables of middle aged men from their baseline to post treatment due to Simplified Kundalini yoga practices. Hence the second hypothesis was rejected.