

CHAPTER - IV

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CHAPTER - IV

RESULTS AND DISCUSSION

As explained earlier 12 subjects were selected to undergo each of the three Interventions i.e. **Yoga Nidra (YN)**, **Bio Feedback (BF)** and **Combined intervention {YN + BF} (Co)**. In addition we had 12 subjects in a **Control group {Nil intervention} (Ct)**. For each of these 48 subject all Physiological and Psychological measurements were administered three times i.e. Firstly prior to the Intervention - referred as **Pre** measurement, then Immediately after the Intervention - referred as **Post** measurement and Finally once again two months after the Intervention - referred as **Follow-up** measurement. The data obtained based on **4 by 3 factorial design** i.e. **Four interventions x Three measures** were analyzed by using the following Statistical Techniques

Multiple Analysis of Variance for Repeated Measures (MANOVA-RM): Pillai's Multivariate tests were carried out for each variable considered in the present study, on the Three measures (Pre, Post and Follow-up) and the Four Interventions (Yoga Nidra, Bio Feedback, Combined and Control) to study the overall impact. Univariate tests for the same were also carried out.

Paired t-test Analysis for Repeated Measures: Paired t-tests were conducted on pairs of two measurements at three levels namely Pre-Post, Pre-Follow-up and Post-Follow-up for each Intervention for each variable. These tests establish the significance of the impact of each Intervention at the three levels.

Analysis of Covariance (ANCOVA): ANCOVA was also conducted at three levels, namely Pre-Post, Pre-Follow-up and Post-Follow-up to study the differential impact of various interventions. Finally at each of the levels the ANCOVA was followed with a Post Hoc comparison by Tukey's HSD procedure at 0.05 level, after duly adjusting the measure being compared for the covariate. This comparison helps us to find out the qualitative impact of various interventions.

4.1. Analysis of BLOOD PRESSURE (Systolic and Diastolic)

TABLE 4.1(i)A. Means and Standard Deviations of Systolic BP in mm of Hg

| Intervention | N | Pre | | Post | | Follow-up | |
|---------------|----|--------|------|--------|-------|-----------|-------|
| | | Mean | SD | Mean | SD | Mean | SD |
| Yoga Nidra | 12 | 151.50 | 6.99 | 130.50 | 7.49 | 135.67 | 6.97 |
| Bio Feedback | 12 | 152.17 | 5.56 | 140.50 | 6.45 | 147.00 | 7.36 |
| Combined | 12 | 148.33 | 9.41 | 130.17 | 5.88 | 129.33 | 5.93 |
| Control | 12 | 151.67 | 7.28 | 151.50 | 8.14 | 151.67 | 8.39 |
| Entire Sample | 48 | 150.92 | 7.36 | 138.17 | 11.16 | 140.92 | 11.36 |

TABLE 4.1(i)B. MANOVA-RM on Pre, Post and Follow-up Measures of Systolic BP

| Pillai's Multivariate Tests | Pillai's Value | Hypoth. df | Error df | Approx. F | Remarks |
|-----------------------------|----------------|------------|----------|-----------|---------|
| Systolic BP | 0.81889 | 2 | 43 | 97.21 | *** |
| Intervention By Systolic BP | 0.92942 | 6 | 88 | 12.73 | *** |
| Univariate F-tests | SS | df | MS | F | Remarks |
| Within Cells | 1616.44 | 88 | 18.37 | | |
| Systolic BP | 4322.00 | 2 | 2161.00 | 117.65 | *** |
| Intervention By Systolic BP | 2138.89 | 6 | 356.48 | 19.41 | *** |

*** Significant at 0.001 level

The first F value in the Pillai's Multivariate Table is 97.21. It indicates that there is a highly significant (0.001 level) variation in the Systolic BP between the three measures, taking all interventions together. The corresponding Univariate F value is 117.65, which confirms the same. The second F value in the Pillai's Multivariate Table is 12.73. It indicates that there is a highly significant (0.001 level) variation in the Systolic BP between the interventions and the three measures. The corresponding Univariate F value is 19.41, which confirms the same.

TABLE 4.1(ii)A. Means and Standard Deviations of Diastolic BP in mm of Hg

| Intervention | N | Pre | | Post | | Follow-up | |
|---------------|----|--------|------|-------|------|-----------|------|
| | | Mean | SD | Mean | SD | Mean | SD |
| Yoga Nidra | 12 | 101.00 | 3.86 | 86.33 | 4.16 | 87.67 | 4.33 |
| Bio Feedback | 12 | 98.83 | 2.17 | 93.17 | 3.95 | 97.17 | 2.48 |
| Combined | 12 | 98.17 | 5.36 | 83.33 | 3.94 | 83.67 | 4.66 |
| Control | 12 | 99.17 | 3.01 | 98.17 | 3.86 | 97.33 | 3.75 |
| Entire Sample | 48 | 99.29 | 3.82 | 90.25 | 7.01 | 91.46 | 7.11 |

TABLE 4.1(ii)B. MANOVA-RM on Pre, Post and Follow-up Measures of Diastolic BP

| Pillai's Multivariate Tests | Pillai's Value | Hypoth df | Error df | Approx. F | Remarks |
|------------------------------|----------------|-----------|----------|-----------|---------|
| Diastolic BP | 0.86994 | 2 | 43 | 143.80 | *** |
| Intervention By Diastolic BP | 1.06280 | 6 | 88 | 16.63 | *** |
| Univariate F-tests | SS | df | MS | F | Remarks |
| Within Cells | 534.67 | 88 | 6.08 | | |
| Diastolic BP | 2313.17 | 2 | 1156.58 | 190.36 | *** |
| Intervention By Diastolic BP | 1210.83 | 6 | 201.81 | 33.21 | *** |

*** Significant at 0.001 level

The first F value in the Pillai's Multivariate Table is 143.80. It indicates that there is a highly significant (0.001 level) variation in the Diastolic BP between the three measures, taking all interventions together. The corresponding Univariate F value is 190.36, which confirms the same. The second F value in the Pillai's Multivariate Table is 16.63. It indicates that there is a highly significant (0.001 level) variation in the Diastolic BP between the interventions and the three measures. The corresponding Univariate F value is 33.21, which confirms the same.

TABLE 4.1(i)C. Paired t-test Analysis for Repeated Measures on Systolic BP

| Comparison | Intervention | t-value | df | Remarks |
|-------------------|--------------|---------|----|---------|
| Pre Vs Post | Yoga Nidra | 9.95 | 11 | *** |
| | Bio Feedback | 7.00 | 11 | *** |
| | Combined | 7.94 | 11 | *** |
| | Control | 0.17 | 11 | NS |
| Pre Vs Follow-up | Yoga Nidra | 7.26 | 11 | *** |
| | Bio Feedback | 3.05 | 11 | * |
| | Combined | 8.55 | 11 | *** |
| | Control | 0.00 | 11 | NS |
| Post Vs Follow-up | Yoga Nidra | 3.68 | 11 | ** |
| | Bio Feedback | 3.20 | 11 | ** |
| | Combined | 0.60 | 11 | NS |
| | Control | 0.13 | 11 | NS |

NS Not Significant, * Sig. at 0.05 level, *** Sig. at 0.001 level

The Paired t-values for the **Pre versus Post** comparisons are 9.95 for Yoga Nidra, 7.00 for Bio Feedback, 7.94 for the Combined intervention and 0.17 for the Control group. Each of the three interventions showed highly significant effect (0.001 level) whereas the effect in the Control group is not significant. The Paired t-values for the **Pre versus Follow-up** comparisons are 7.26 (sig. at 0.001 level) for Yoga Nidra, 3.05 (sig. at 0.05 level) for Bio Feedback, 8.55 (sig. at 0.001 level) for the Combined intervention and 0.00 (not sig) for the Control group. The Paired t-values for the **Post versus Follow-up** comparisons are 3.86 (sig. at 0.01 level) for Yoga Nidra, 3.20 (sig. at 0.01 level) for Bio Feedback, 0.60 (not sig.) for the Combined intervention and 0.13 (not sig.) for the Control group.

TABLE 4.1(ii)C. Paired t-test Analysis for Repeated Measures on Diastolic BP

| Comparison | Intervention | t-value | df | Remarks |
|-------------------|--------------|---------|----|---------|
| Pre Vs Post | Yoga Nidra | 11.00 | 11 | *** |
| | Bio Feedback | 6.69 | 11 | *** |
| | Combined | 15.85 | 11 | *** |
| | Control | 0.92 | 11 | NS |
| Pre Vs Follow-up | Yoga Nidra | 9.24 | 11 | *** |
| | Bio Feedback | 2.42 | 11 | * |
| | Combined | 10.91 | 11 | *** |
| | Control | 2.30 | 11 | * |
| Post Vs Follow-up | Yoga Nidra | 1.88 | 11 | NS |
| | Bio Feedback | 5.42 | 11 | *** |
| | Combined | 0.30 | 11 | NS |
| | Control | 1.33 | 11 | NS |

NS Not Significant, * Sig. at 0.05 level, *** Sig. at 0.001 level

The Paired t-values for the **Pre versus Post** comparisons are 11.00 for Yoga Nidra, 6.69 for Bio Feedback, 15.85 for the Combined group and 0.92 for the Control group. Each of the three interventions shows highly significant effect (0.001 level), whereas the effect in the Control group is not significant. The Paired t-values for the **Pre versus Follow-up** comparisons are 9.24 (sig. at 0.001 level) for Yoga Nidra, 2.42 (sig. at 0.05 level) for Bio Feedback, 10.91(sig. at 0.001 level) for the Combined group and 2.30 (sig. at 0.05 level) for the Control group. The Paired t-values for the **Post versus Follow-up** comparisons are 1.88 (not sig.) for Yoga Nidra, 5.42 (sig. at 0.001 level) for Bio Feedback, 0.30(not sig.) for the Combined and 1.33 (not sig.) for the Control group.

TABLE 4.1(i)D. ANCOVA on Post Systolic BP with Pre Systolic BP as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|--------------------------------|---------|----|---------|-------|---------|
| Covariate (Pre Systolic BP) | 1229.79 | 1 | 1229.79 | | |
| Main Effects (Intervention) | 3269.86 | 3 | 1089.95 | 34.59 | *** |
| Residual | 1355.01 | 43 | 31.51 | | |
| Total | 5854.67 | 47 | 124.57 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 6.14

| Mean Post Systolic BP duly adjusted for Pre Systolic BP (mm Hg) | Intervention | YN | Co | BF | Ct |
|--|-----------------|----|----|----|----|
| 130.16 | Yoga Nidra | | | | |
| 131.68 | Combined | | | | |
| 139.77 | Bio Feedback | * | * | | |
| 150.07 | Control | * | * | * | |

* Significant at 0.05 level

Homogeneous Subsets

1. Yoga Nidra and Combined
2. Bio Feedback
3. Control

F value for the Post Systolic BP (with Pre Systolic BP as covariate) is 34.59. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the drop in the adjusted Post Systolic BP in case of Yoga Nidra is similar to the drop in case of Combined intervention whereas the drop in case of Bio Feedback and the Control groups differs significantly with the other groups.

TABLE 4.1(ii)D. ANCOVA on Post Diastolic BP with Pre Diastolic BP as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|---------------------------------|---------|----|--------|-------|---------|
| Covariate (Pre Diastolic BP) | 177.58 | 1 | 177.58 | | |
| Main Effects (Intervention) | 1643.96 | 3 | 547.99 | 48.34 | *** |
| Residual | 487.46 | 43 | 11.34 | | |
| Total | 2309.00 | 47 | 49.13 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 3.68

| Mean Post Diastolic BP duly adjusted for Pre Diastolic BP (mm Hg) | Intervention | Co | YN | BF | Ct |
|--|--------------|----|----|----|----|
| 83.98 | Combined | | | | |
| 85.35 | Yoga Nidra | | | | |
| 93.43 | Bio Feedback | * | * | | |
| 98.24 | Control | * | * | * | |

* Significant at 0.05 level

Homogeneous Subsets

1. Combined and Yoga Nidra
2. Bio Feedback
3. Control

F value for the Post Diastolic BP (with Pre Diastolic BP as covariate) is 48.34. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the drop in the adjusted Post Diastolic BP in the case of Yoga Nidra was similar to the drop in case of Combined intervention. The drop in case of Bio Feedback differs significantly from the other groups. Likewise the drop in case of Control group also differs significantly from the other groups.

TABLE 4.1(i)E. ANCOVA on Follow-up Systolic BP with Pre Systolic BP as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|--------------------------------|---------|----|---------|-------|---------|
| Covariate (Pre Systolic BP) | 1528.29 | 1 | 1528.29 | | |
| Main Effects (Intervention) | 3120.73 | 3 | 1040.24 | 31.62 | *** |
| Residual | 1414.64 | 43 | 32.90 | | |
| Total | 6063.67 | 47 | 129.01 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 6.28

| Mean Follow-up Systolic BP duly adjusted for Pre Systolic BP (mm Hg) | Intervention | Co | YN | BF | Ct |
|---|--------------|----|----|----|----|
| 130.89 | Combined | | | | |
| 135.32 | Yoga Nidra | | | | |
| 146.25 | Bio Feedback | * | * | | |
| 151.22 | Control | * | * | | |

*Significant at 0.05 level

Homogeneous Subsets

1. Combined and Yoga Nidra
2. Bio Feedback and Control

F value for the Follow-up Systolic BP (with Pre Systolic BP as covariate) is 31.62. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the drop in the adjusted Follow-up Systolic BP in case of Yoga Nidra was similar to the drop in case of Combined intervention. The drop in case of Bio Feedback and the Control groups, is similar. Each of the Biofeedback and Control groups differs significantly from the Yoga Nidra and the Combined interventions.

TABLE 4.1(ii)E. ANCOVA on Follow-up Diastolic BP with Pre Diastolic BP as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|---------------------------------|---------|----|--------|-------|---------|
| Covariate (Pre Diastolic BP) | 140.14 | 1 | 140.14 | | |
| Main Effects (Intervention) | 1730.77 | 3 | 576.92 | 49.32 | *** |
| Residual | 503.01 | 43 | 11.70 | | |
| Total | 2373.92 | 47 | 50.51 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 3.74

| Mean Follow-up Diastolic BP duly adjusted for Pre Diastolic BP (mm Hg) | Intervention | Co | YN | BF | Ct |
|---|--------------|----|----|----|----|
| 84.24 | Combined | | | | |
| 86.80 | Yoga Nidra | | | | |
| 97.40 | Bio Feedback | * | * | | |
| 97.40 | Control | * | * | | |

* Significant at 0.05 level

Homogeneous Subsets

1. Combined and Yoga Nidra
2. Bio Feedback and Control

F value for the Follow-up Diastolic BP (with Pre Diastolic BP as covariate) is 49.32. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the drop in the adjusted Follow-up Diastolic BP in the case of Yoga Nidra is similar to the drop in case of Combined intervention. The drop in case of Bio Feedback and Control group, is similar. Each of the Bio Feedback and the Control group differs significantly from the Yoga Nidra and Combined interventions.

TABLE 4.1(i)F. ANCOVA on Follow-up Systolic BP with Post Systolic BP as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|---------------------------------|---------|----|---------|------|---------|
| Covariate (Post Systolic BP) | 4422.89 | 1 | 4422.89 | | |
| Main Effects (Intervention) | 526.55 | 3 | 175.52 | 6.77 | *** |
| Residual | 1114.23 | 43 | 25.91 | | |
| Total | 6063.67 | 47 | 129.01 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 5.57

| Mean Follow-up Systolic BP duly adjusted for Post Systolic BP (mm Hg) | Intervention | Co | YN | Ct | BF |
|--|--------------|----|----|----|----|
| 135.21 | Combined | | | | |
| 141.30 | Yoga Nidra | * | | | |
| 141.88 | Control | * | | | |
| 145.29 | Bio Feedback | * | | | |

* Significant at 0.05 level

Homogeneous Subsets

1. Combined
2. Yoga Nidra, Control and Bio Feedback

F value for the Follow-up Systolic BP (with Post Systolic BP as covariate) is 6.77. It indicates highly significant differential carryover impact of the interventions. Post Hoc comparisons show that the drop in the adjusted Post Systolic BP in the case of Combined intervention differs significantly from the drop in the other three groups (which had similar drop).

TABLE 4.1(ii)F. ANCOVA on Follow-up BP with Post Diastolic BP as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|----------------------------------|---------|----|---------|------|---------|
| Covariate (Post Diastolic BP) | 1892.68 | 1 | 1892.68 | | |
| Main Effects (Intervention) | 183.51 | 3 | 61.17 | 8.84 | *** |
| Residual | 297.73 | 43 | 6.92 | | |
| Total | 2373.92 | 47 | 50.51 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 2.88

| Mean Follow-up Diastolic BP duly adjusted for Post Diastolic BP (mm Hg) | Intervention | Co | YN | Ct | BF |
|--|--------------|----|----|----|----|
| 88.71 | Combined | | | | |
| 90.52 | Yoga Nidra | | | | |
| 91.57 | Control | | | | |
| 95.04 | Bio Feedback | * | * | * | |

* Significant at 0.05 level

Homogeneous Subsets

1. Combined, Yoga Nidra and Control
2. Bio Feedback

F value for the Follow-up Diastolic BP (with Post Diastolic BP as covariate) is 8.84. It indicates highly significant differential carryover impact of the interventions. Post Hoc comparisons show that the change in the adjusted Follow-up Diastolic BP in case of Bio Feedback differs significantly from the drop in the other three groups (which had similar drop).

DISCUSSION on BLOOD PRESSURE (Systolic and Diastolic)

The MANOVA-RM results for Systolic blood pressure and Diastolic blood pressure are presented in the tables above. These results confirm highly significant *Intrasubject* (within the group) and *Intersubject* (among the groups) differences in Systolic as well as Diastolic blood pressures. Paired t-tests and ANCOVAs (followed with Tukey's post hoc comparisons) were carried out at three levels (Pre-Post, Post-Follow-up and Pre-Follow-up), to study the kind of differential impact of the intervention techniques.

Pre-Post comparisons

The readings of systolic blood pressure show average fall of about 21 mmHg in Yoga Nidra group, 12 mmHg in Bio Feedback group, 18 mmHg in Combined group and almost no change in the control group. The readings of diastolic blood pressure show average fall of about 15 mmHg in Yoga Nidra group, 6 mmHg in BF group, 15 mmHg in Combined group and 1 mm Hg in the Control group. The **paired t-tests** confirm that each of the three intervention techniques significantly reduces the systolic and diastolic blood pressures whereas the control group does not show any significant reduction. The **ANCOVA** confirms the differential impact of interventions at this level. So the null hypothesis "*There will be no differential impact of the intervention techniques on blood pressure*" is rejected at Pre-Post level. The **Post Hoc** comparisons after the ANCOVAs give the precise differences, which reveal that the immediate reduction in BP (Systolic and Diastolic) after intervention is maximum and similar in Yoga Nidra and Combined groups. The Bio Feedback group though shows statistically significant reduction in BP, it is comparatively lesser than the reduction in Yoga Nidra and Combined groups. There is no improvement in the Control group.

Pre-Follow-up comparisons

At this level i.e. when the before intervention blood pressure readings are compared with the blood pressure readings taken two months after the intervention, the average fall in systolic blood pressure is about 16 mmHg in Yoga Nidra group, 5 mmHg in Bio Feedback group, 19 mmHg in Combined group and nil in Control group. The average fall in diastolic blood pressure is about 13 mmHg in Yoga Nidra group, 2 mmHg in Bio Feedback group, 15 mmHg in Combined group and 2 mmHg in Control group. The **paired t-tests** show highly significant reduction in systolic and diastolic blood pressures in Yoga Nidra and Combined groups. The Bio Feedback group shows a borderline significance. The Control group shows no change in systolic blood pressure and a borderline significance in the diastolic blood pressure. The **ANCOVA** confirms the differential impact of interventions at this level also. So the null hypothesis "*There will be no differential impact of the intervention techniques on blood pressure*" is rejected at Pre-Follow-up level. When precise differences are brought out by **post hoc** comparisons, Yoga Nidra and Combined groups show similar impact with maximum reduction in blood pressure, whereas the Bio Feedback and Control groups show similar impact with least reduction in blood pressure.

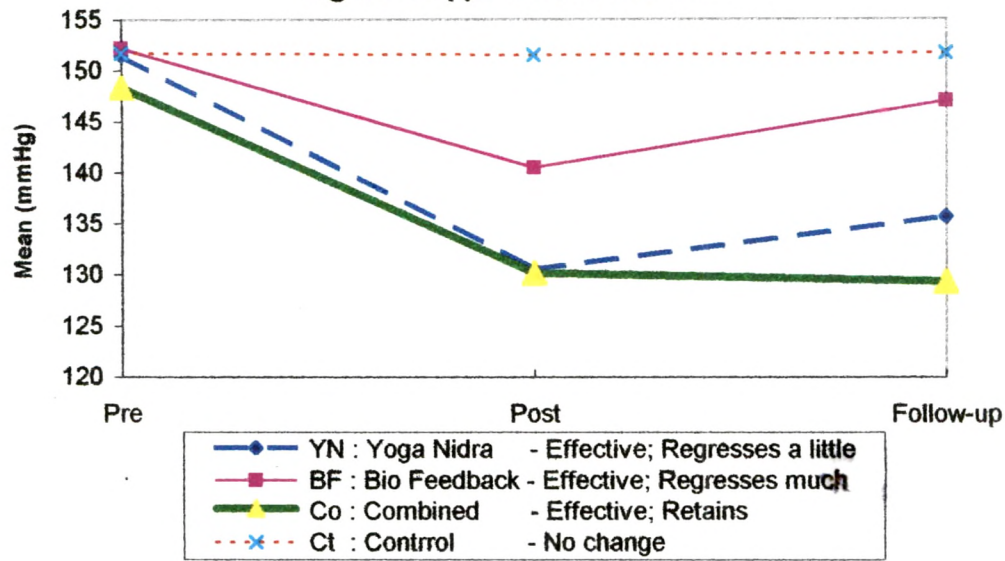
Post-Follow-up comparisons

The comparison between immediate impact of interventions and the impact of interventions after two months, shows that the average systolic blood pressure of the subjects in Yoga Nidra group increased by about 5 mmHg. In Bio Feedback group it increased by 7 mmHg. In the Combined group it shows about 1 mmHg decrease. The average diastolic blood pressure increased by about 1 mmHg in Yoga Nidra group and 4 mmHg the Bio Feedback group. The Combined and Control groups show almost no change in diastolic blood pressure. The **paired t-tests** show significant change in systolic blood pressure in case of Yoga Nidra and Bio Feedback groups, whereas the Combined and Control groups show no significant change in the systolic blood pressure. For the diastolic blood pressure the change is significant only in the Bio Feedback group. At Follow-up (two months after the interventions), it was observed that the impact of

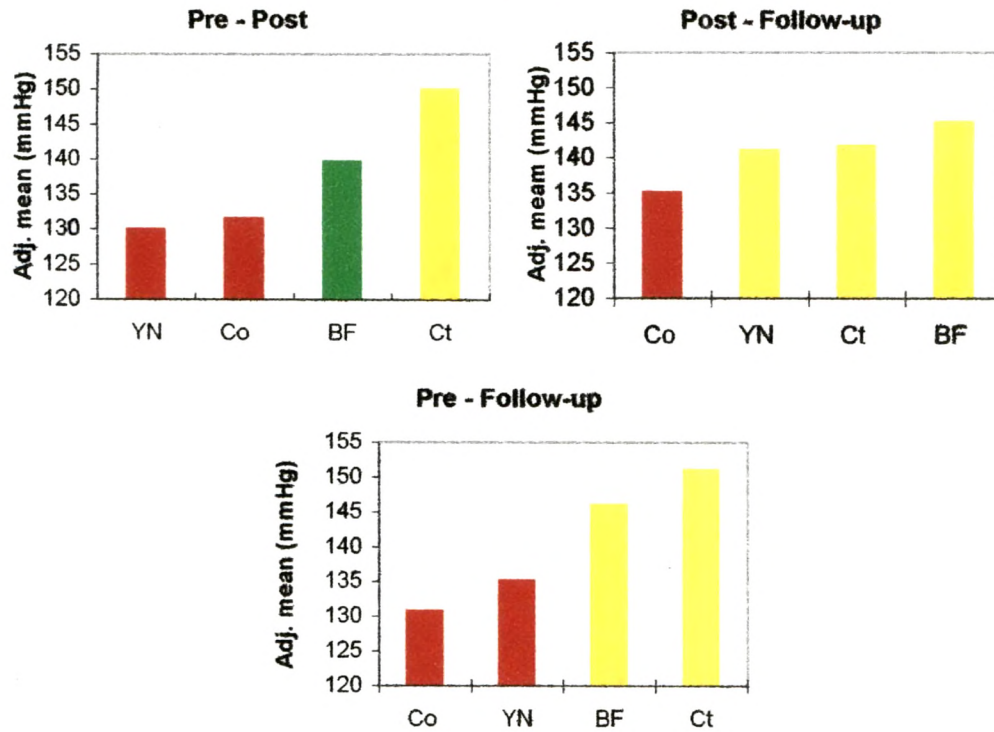
Combined intervention was retained for systolic as well as diastolic blood pressure. In case of Yoga Nidra the impact was retained only in the diastolic blood pressure whereas the systolic blood pressure regressed. In case of Bio Feedback both systolic and diastolic blood pressures regressed. The ANCOVA confirms the differential impact of interventions at this level also. So the null hypothesis *“There will be no differential impact of the intervention techniques on blood pressure”* is rejected at Post-Follow-up level. When the precise difference was investigated through **post hoc** tests, the Combined group shows maximum improvement, whereas the improvement in all other groups is more or less similar for systolic blood pressure. In case of diastolic blood pressure the Bio Feedback group shows maximum regression, whereas the change in all other groups is similar. Comparatively the Combined intervention is the most effective technique.

Variations in Systolic and Diastolic BP from Pre to Post and Follow-up stages as well as variations in adjusted Systolic and Diastolic BP in the three Post Hoc comparisons are depicted graphically in Figures 4.1(i)a and 4.1(ii)a. The trends in Systolic and Diastolic BP during 18 intervention sessions are depicted in Figures 4.1(i)b and 4.1(ii)b.

Figure 4.1(i)a SYSTOLIC BP



Post Hoc Comparisons



Interventions forming a homogeneous subset at a level are indicated by the same colour

Figure 4.1(i)b Trend of SYSTOLIC BP at Intervention Sessions

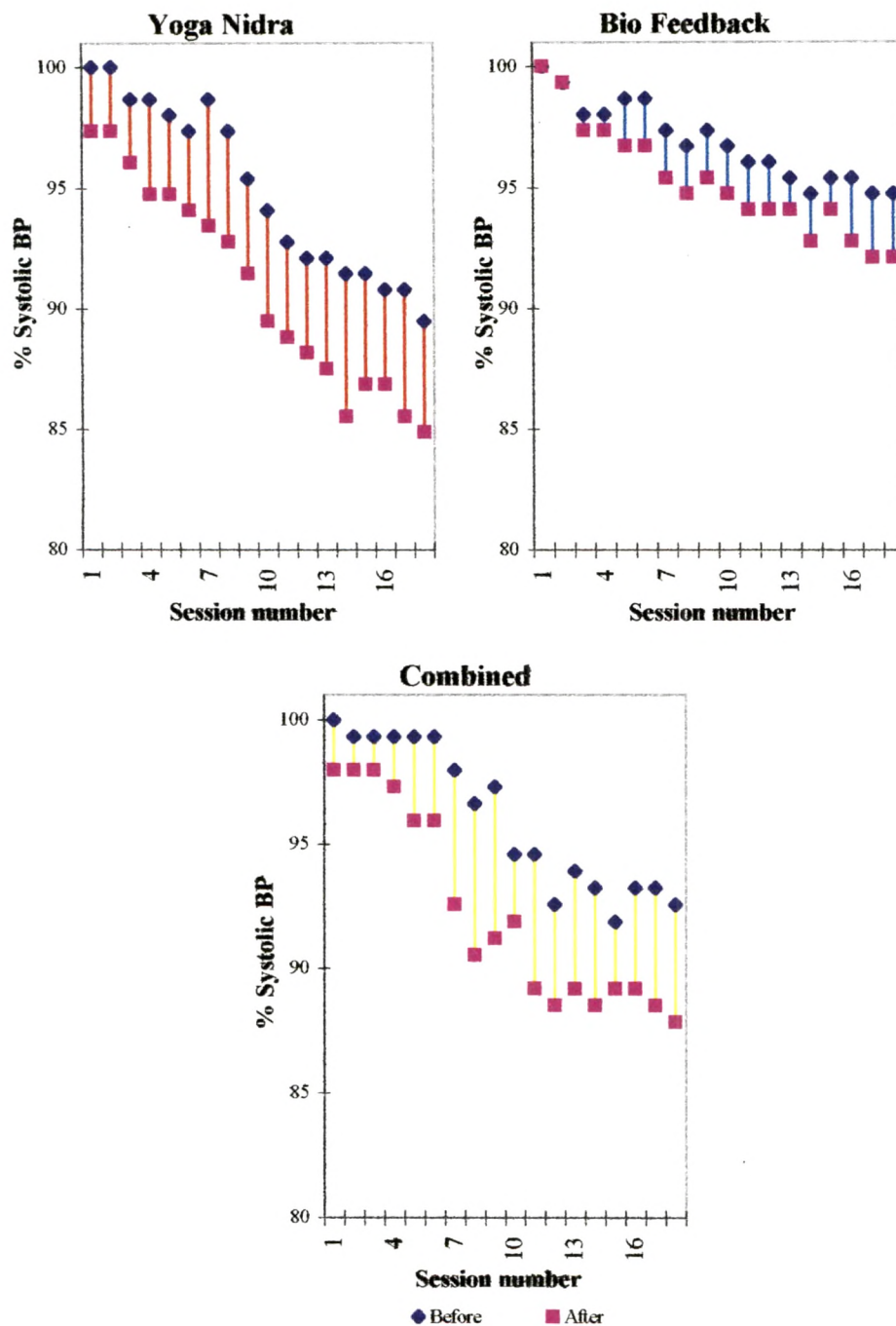
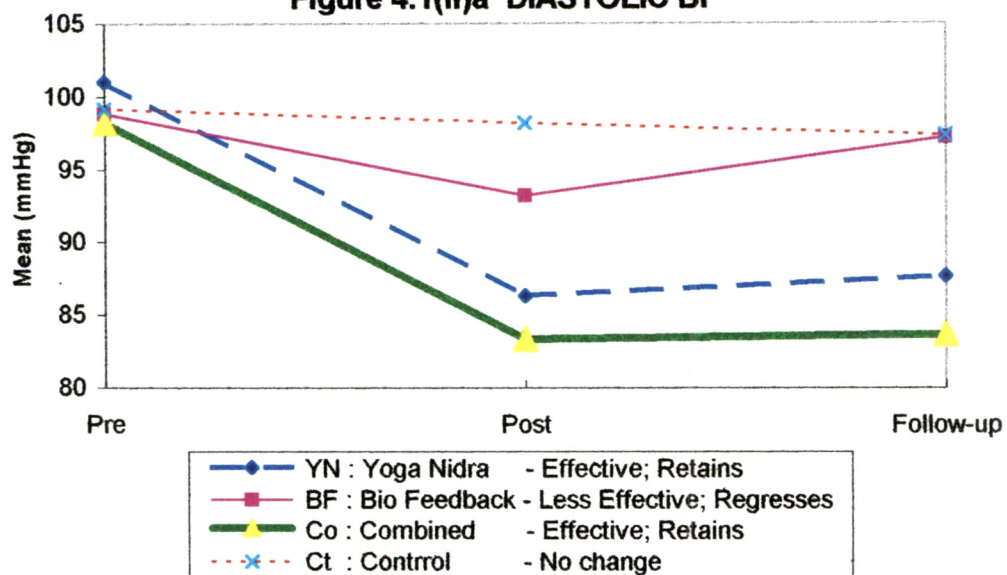
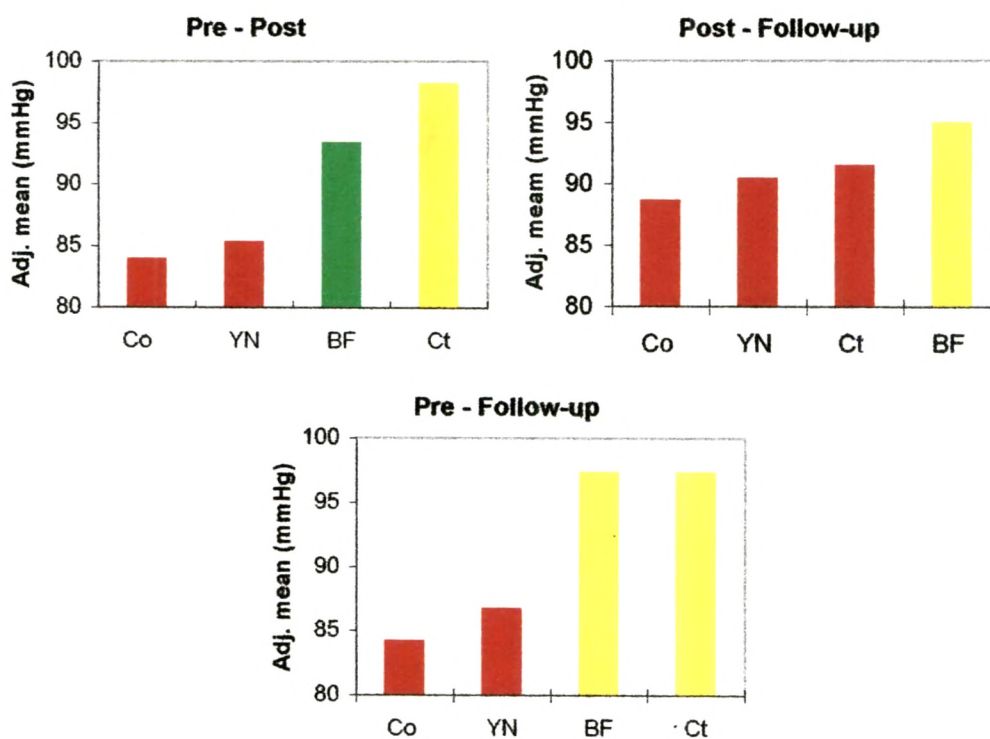


Figure 4.1(ii)a DIASTOLIC BP

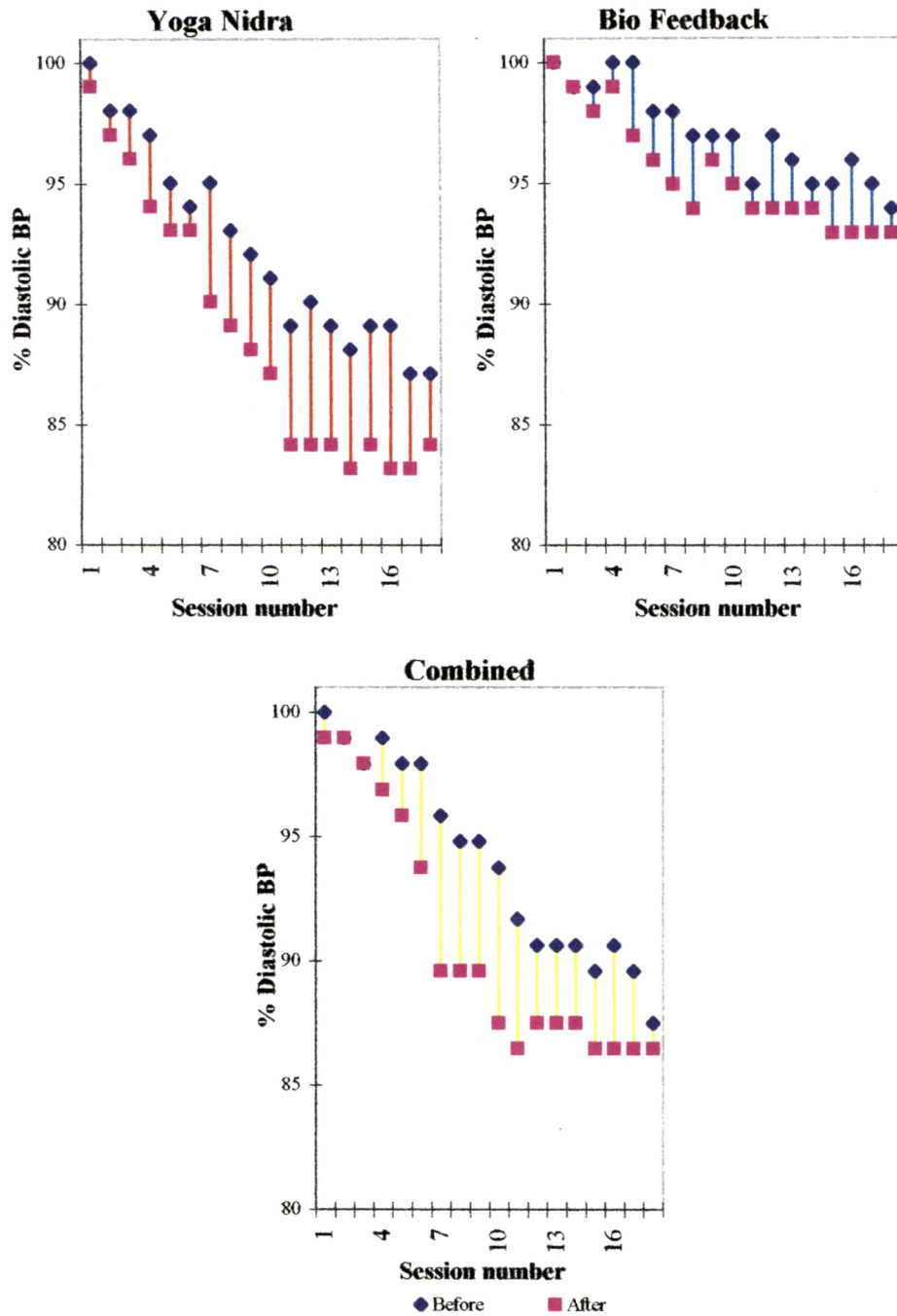


Post Hoc Comparisons



Interventions forming a homogeneous subset at a level are indicated by the same colour

Figure 4.1(ii)b Trend of DIASTOLIC BP at Intervention Sessions



4.2. Analysis of PULSE

TABLE 4.2A. Means and Standard Deviations of PULSE rate per minute

| Intervention | N | Pre | | Post | | Follow-up | |
|---------------|----|-------|-------|-------|------|-----------|------|
| | | Mean | SD | Mean | SD | Mean | SD |
| Yoga Nidra | 12 | 98.00 | 7.03 | 74.67 | 5.73 | 81.33 | 5.85 |
| Bio Feedback | 12 | 86.83 | 10.32 | 77.58 | 9.51 | 80.33 | 9.18 |
| Combined | 12 | 94.83 | 6.42 | 76.42 | 7.90 | 74.83 | 6.95 |
| Control | 12 | 88.75 | 8.30 | 87.83 | 7.59 | 90.33 | 7.45 |
| Entire Sample | 48 | 92.10 | 9.11 | 79.13 | 9.16 | 81.71 | 9.14 |

TABLE 4.2B. MANOVA-RM on Pre, Post and Follow-up Measures of Pulse

| Pillai's Multivariate Tests | Pillai's Value | Hypoth. df | Error df | Approx. F | Remarks |
|-----------------------------|----------------|------------|----------|-----------|---------|
| Pulse | 0.87796 | 2 | 43 | 154.67 | *** |
| Intervention By Pulse | 1.23910 | 6 | 88 | 23.88 | *** |
| Univariate F-tests | SS | df | MS | F | Remarks |
| Within Cells | 984.72 | 88 | 11.19 | | |
| Pulse | 4531.29 | 2 | 2265.65 | 202.47 | *** |
| Intervention By Pulse | 2481.99 | 6 | 413.66 | 36.97 | *** |

*** Significant at 0.001 level

The first F value in the Pillai's Multivariate Table is 154.67. It indicates that there is a highly significant (0.001 level) variation in the Pulse rate between the three measures, taking all interventions together. The corresponding Univariate F value is 202.47, which confirms the same. The second F value in the Pillai's Multivariate Table is 23.88. It indicates that there is a highly significant (0.001 level) variation in the Pulse rate between the interventions and the three measures. The corresponding Univariate F value is 36.97, which confirms the same.

TABLE 4.2C. Paired t-test Analysis for Repeated Measures on Pulse

| Comparison | Intervention | t-value | df | Remarks |
|-------------------|--------------|---------|----|---------|
| Pre Vs Post | Yoga Nidra | 15.36 | 11 | *** |
| | Bio Feedback | 5.30 | 11 | *** |
| | Combined | 10.46 | 11 | *** |
| | Control | 1.61 | 11 | NS |
| Pre Vs Follow-up | Yoga Nidra | 11.04 | 11 | *** |
| | Bio Feedback | 2.77 | 11 | * |
| | Combined | 13.27 | 11 | *** |
| | Control | 2.92 | 11 | * |
| Post Vs Follow-up | Yoga Nidra | 6.16 | 11 | *** |
| | Bio Feedback | 2.61 | 11 | * |
| | Combined | 1.97 | 11 | NS |
| | Control | 4.49 | 11 | *** |

NS Not Significant, * Sig. at 0.05 level, ** Sig. at 0.01 level, *** Sig. at 0.001 level

The Paired t-values for the **Pre versus Post** comparisons are 15.36 for Yoga Nidra, 5.30 for Bio Feedback, 10.46 for the Combined group and 1.61 for the Control group. Each of the three interventions shows highly significant effect (0.001 level) whereas the effect in the Control group is not significant. The Paired t-values for the **Pre versus Follow-up** comparisons are 11.04 (sig at 0.001 level) for Yoga Nidra, 2.77 (sig. at 0.05 level) for Bio Feedback, 13.27(sig. at 0.001 level) for the Combined group and 2.92 (not sig.) for the Control group. The Paired t-values for the **Post versus Follow-up** comparisons are 6.16 (sig at 0.001 level) for Yoga Nidra, 2.61 (sig. at 0.05 level) for Bio Feedback, 1.97 (not sig.) for the Combined group and 4.49 (sig. at 0.001 level) for the Control group.

TABLE 4.2D. ANCOVA on Post Pulse with Pre Pulse as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|-----------------------------|---------|----|--------|-------|---------|
| Covariate (Pre Pulse) | 627.91 | 1 | 627.90 | | |
| Main Effects (Intervention) | 2324.41 | 3 | 774.80 | 33.69 | *** |
| Residual | 988.94 | 43 | 23.00 | | |
| Total | 3941.25 | 47 | 83.86 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 5.25

| Mean Post Pulse duly adjusted for Pre Pulse (rate/minute) | Intervention | YN | Co | BF | Ct |
|--|--------------|----|----|----|----|
| 70.20 | Yoga Nidra | | | | |
| 74.35 | Combined | | | | |
| 81.59 | Bio Feedback | * | * | | |
| 90.38 | Control | * | * | * | |

* Significant at 0.05 level

Homogeneous Subsets

1. Yoga Nidra and Combined
2. Bio Feedback
3. Control

F value for the Post Pulse (with Pre Pulse as covariate) is 33.69. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the drop in the adjusted Post Pulse rate in case of Yoga Nidra is similar to the drop in case of Combined intervention whereas the drop in case of Bio Feedback and the Control groups differs significantly with the other groups.

TABLE 4.2E. ANCOVA on Follow-up Pulse with Pre Pulse as covariate

| Source of Variation | SESSION S | df | MS | F | Remarks |
|-----------------------------|--------------|----|--------|-------|---------|
| Covariate (Pre Pulse) | 569.25 | 1 | 569.25 | 30.43 | *** |
| Main Effects (Intervention) | 2284.51 | 3 | 761.50 | | |
| Residual | 11076.16 | 43 | 25.03 | | |
| Total | 3929.92 | 47 | 83.62 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 5.47

| Mean Follow-up Pulse duly adjusted for Pre Pulse (rate/minute) | Intervention | Co | YN | BF | Ct |
|---|--------------|----|----|----|----|
| 72.97 | Combined | | | | |
| 77.30 | Yoga Nidra | | | | |
| 83.94 | Bio Feedback | * | * | | |
| 92.63 | Control | * | * | * | |

* Significant at 0.05 level

Homogeneous Subsets

1. Combined and Yoga Nidra
2. Bio Feedback
3. Control

F value for the Follow-up Pulse (with Pre Pulse as covariate) is 30.42. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the drop in the adjusted Follow-up Pulse rate in case of Yoga Nidra is similar to the drop in case of Combined intervention whereas the drop in case of Bio Feedback and the Control groups differs significantly with the other groups.

TABLE 4.2F. ANCOVA on Follow-up Pulse with Post Pulse as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|-----------------------------|---------|----|---------|-------|---------|
| Covariate (Post Pulse) | 3139.76 | 1 | 3139.76 | 14.97 | *** |
| Main Effects (Intervention) | 403.69 | 3 | 134.56 | | |
| Residual | 386.47 | 43 | 8.99 | | |
| Total | 3929.92 | 47 | 83.62 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 3.28

| Mean Follow-up Pulse duly adjusted for Post Pulse (rate/minute) | Intervention | Co | BF | Ct | YN |
|--|--------------|----|----|----|----|
| 77.21 | Combined | | | | |
| 81.69 | Bio Feedback | * | | | |
| 82.70 | Control | * | | | |
| 85.25 | Yoga Nidra | * | * | | |

* Significant at 0.05 level

Homogeneous Subsets

1. Combined
2. Bio Feedback and Control
3. Yoga Nidra

F value for the Follow-up Pulse (with Post Pulse as covariate) is 14.97. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the Bio Feedback and Control groups form a homogeneous subset. The Combined group differs significantly from the other three groups. Likewise the Yoga Nidra also differs significantly from the other three groups.

DISCUSSION on PULSE

The MANOVA-RM results for Pulse rate are presented in the tables above. These results indicate highly significant *Intrasubject* (within the group) and *Intersubject* (among the groups) differences in the Pulse rate. Paired t-tests and ANCOVAs (followed with Tukey's post hoc comparisons) were carried out at three levels (Pre-Post, Post-Follow-up and Pre-Follow-up), to study the kind of differential impact of the intervention techniques.

Pre-Post comparisons

The readings of Pulse rate show an average fall of about 23 beats/minute in Yoga Nidra group, 9 beats/minute in Bio Feedback group, 20 beats/minute in Combined group and 1 beat/minute in the Control group. The paired t-tests indicate highly significant reduction in the Pulse rate in all the intervention groups whereas the reduction in Pulse rate in the Control group is not significant. The ANCOVA confirms the differential impact of interventions at this level. So the null hypothesis "*There will be no differential impact of the intervention techniques on Pulse rate (Beats/minute)*" is rejected at Pre-Post level. The Post Hoc comparisons after the ANCOVAs give the precise differences, which reveal that the Yoga Nidra and Combined intervention groups show maximum and similar impact. The Bio Feedback intervention group shows minimum reduction in Pulse rate. There is no improvement in the Control group.

Pre-Follow-up comparisons

At this level, i.e., when the before intervention Pulse rate are compared with the readings taken two months after the intervention, there is an average fall of about 17 beats/minute in Yoga Nidra group, 6 beats/minute in Bio Feedback group, 20 beats/minute in Combined group. The Pulse rate increased by about 2 beats/minute in the Control group. The paired t-tests indicate highly significant reduction in the Pulse rate in Yoga Nidra and Combined intervention groups. The Bio Feedback group shows border-line reduction in the Pulse rate. The Control group shows border-line increase in the Pulse rate. The ANCOVA confirms the differential impact of interventions at this level also. So the null hypothesis "*There will be no differential impact of the intervention techniques on Pulse rate (Beats/minute)*" is rejected at Pre-Follow-up level. When precise differences

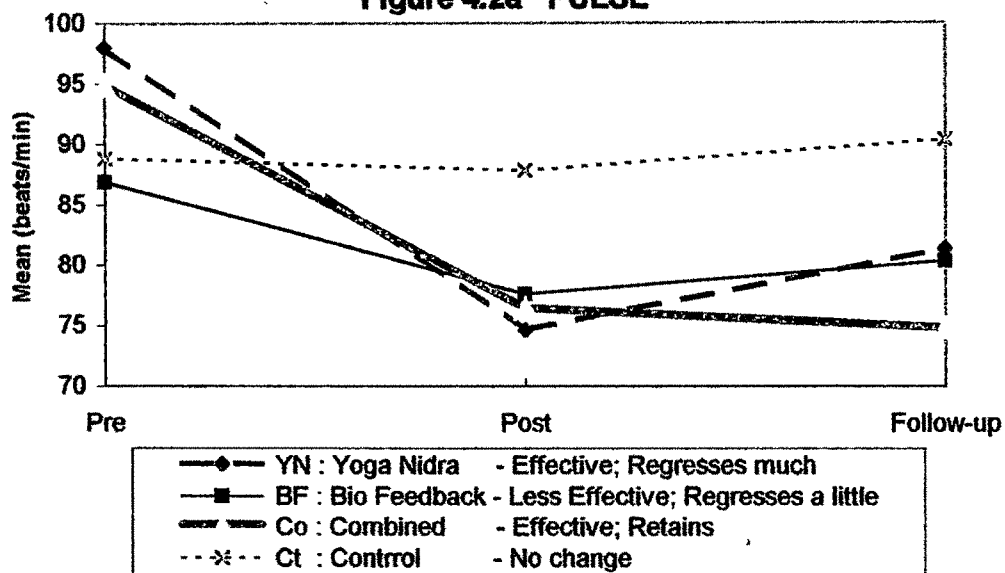
are brought out by **post hoc** comparisons, Yoga Nidra and Combined groups show maximum and similar impact in Pulse rate. The reduction in Pulse rate is lesser the Bio Feedback group and least in the Control groups.

Post-Follow-up comparisons

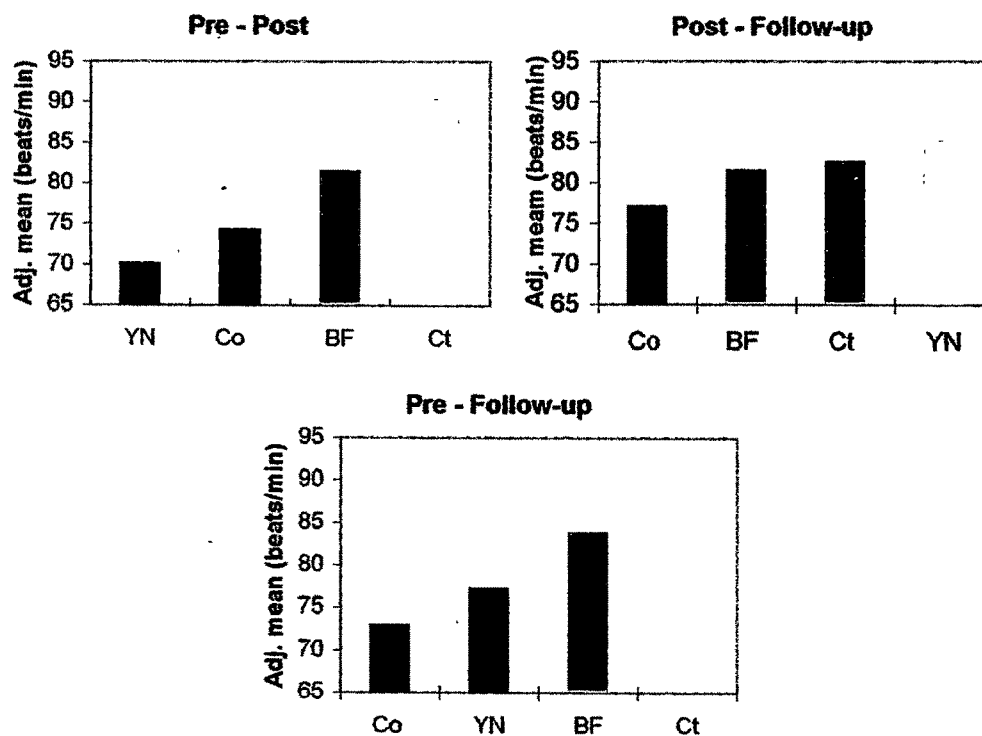
The comparison between immediate impact of interventions and the impact of interventions after two months, shows that the average Pulse rate of the subjects in Yoga Nidra group increased by about 7 beats/minute. In Bio Feedback group it increased by 3 beats/minute. In the Combined group it decreased by 2 beats/minute. In the Control groups it increased by 2 beats/minute. The **paired t-tests** show highly significant rise in Pulse rate in case of Yoga Nidra and Control groups. The Bio Feedback group shows border-line rise in the Pulse rate. The change in the Combined group is not significant. At Follow-up (two months after the interventions), it was observed that the impact of Combined intervention was retained for the Pulse rate whereas the effect of all other groups shows regression. The **ANCOVA** confirms the differential impact of interventions at this level also. So the null hypothesis "*There will be no differential impact of the intervention techniques on Pulse rate (Beats/minute)*" is rejected at Post-Follow-up level. Through **Post Hoc** comparison, when we look at the precise differences, it is seen that except the Combined group all other groups have regressed. The rate of regression is similar for Control and Bio Feedback groups, whereas it is greater in case of Yoga Nidra group.

Variations in Pulse rates from Pre to Post and Follow-up stages as well as variations in adjusted Pulse rates in the three Post Hoc comparisons are depicted graphically in Figure 4.2a. The trends in Pulse rates during 18 intervention sessions are depicted in Figure 4.2b.

Figure 4.2a PULSE

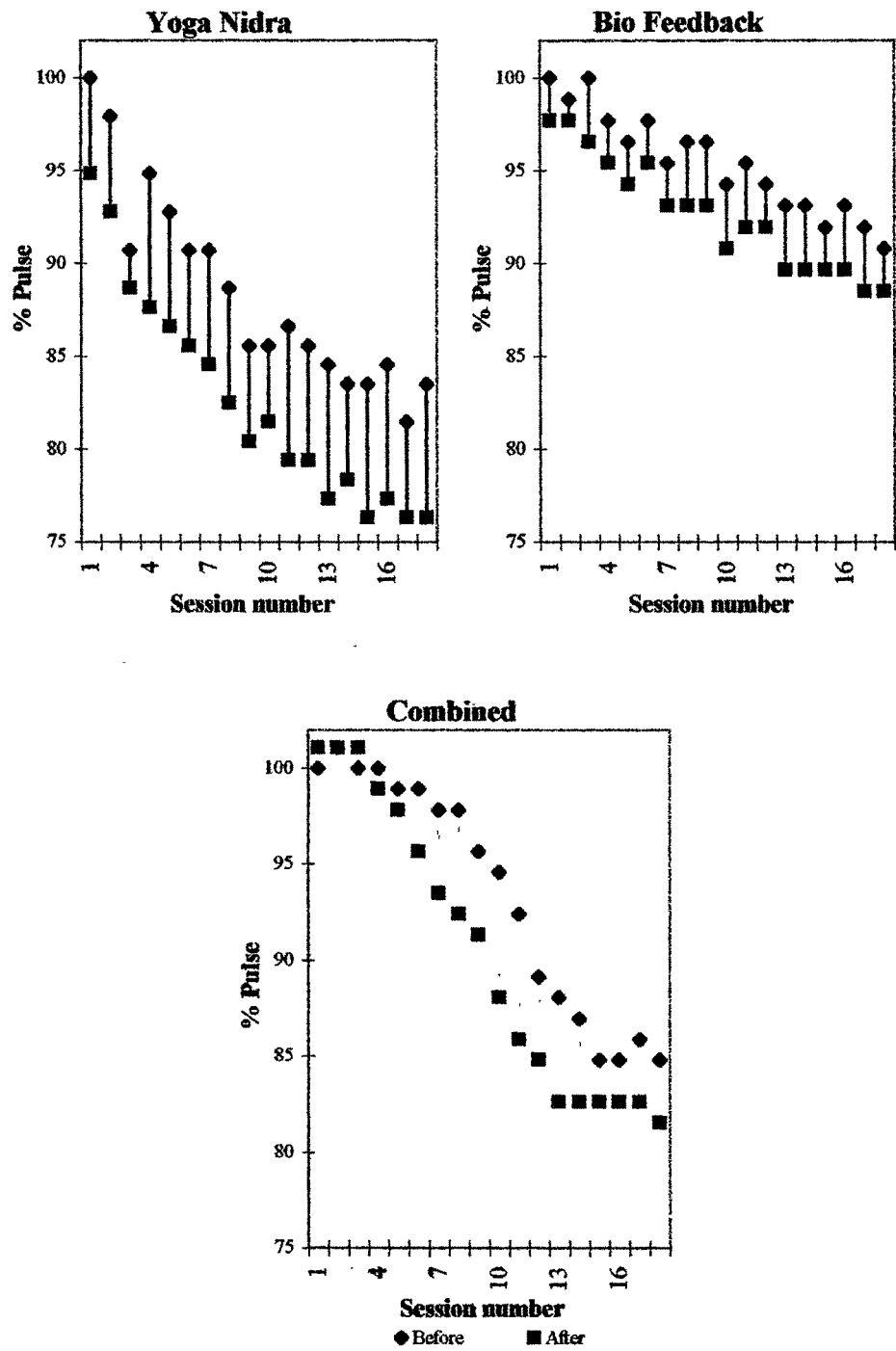


Post Hoc Comparisons



Interventions forming a homogeneous subset at a level are indicated by the same colour

Figure 4.2b Trend of PULSE at Intervention Sessions



4.3. Analysis of RESPIRATION

TABLE 4.3A. Means and Standard Deviations of Respiration rate per minute

| Intervention | N | Pre | | Post | | Follow-up | |
|---------------|----|-------|------|-------|------|-----------|------|
| | | Mean | SD | Mean | SD | Mean | SD |
| Yoga Nidra | 12 | 27.92 | 5.07 | 17.67 | 1.50 | 20.83 | 3.33 |
| Bio Feedback | 12 | 26.08 | 3.23 | 20.75 | 2.96 | 22.33 | 4.01 |
| Combined | 12 | 26.83 | 5.13 | 18.17 | 2.33 | 18.75 | 2.14 |
| Control | 12 | 28.33 | 4.40 | 28.58 | 4.40 | 27.75 | 3.47 |
| Entire Sample | 48 | 27.29 | 4.47 | 21.29 | 5.28 | 22.42 | 4.64 |

TABLE 4.3B. MANOVA-RM on Pre, Post and Follow-up Measures of Respiration

| Pillai's Multivariate Tests | Pillai's Value | Hypoth. df | Error df | Approx. F | Remarks |
|-----------------------------|----------------|------------|----------|-----------|---------|
| Respiration | 0.69763 | 2 | 43 | 49.60 | *** |
| Intervention By Respiration | 0.61587 | 6 | 88 | 6.53 | *** |
| Univariate F-tests | SS | df | MS | F | Remarks |
| Within Cells | 576.67 | 88 | 6.55 | | |
| Respiration | 976.50 | 2 | 488.25 | 74.51 | *** |
| Intervention By Respiration | 432.17 | 6 | 72.05 | 10.99 | *** |

*** Significant at 0.001 level

The first F value in the Pillai's Multivariate Table is 49.60 it indicates that there is a highly significant (0.001 level) variation in the Respiration rate between the three measures, taking all interventions together. The corresponding Univariate F value is 74.51, which confirms the same. The second F value in the Pillai's Multivariate Table is 6.53. It indicates that there is a highly significant (0.001 level) variation in the

Respiration rate between the interventions and the three measures. The corresponding Univariate F value is 10.99, which confirms the same.

TABLE 4.3C. Paired t-test Analysis for Repeated Measures on Respiration

| Comparison | Intervention | t-value | df | Remarks |
|-------------------|--------------|---------|----|---------|
| Pre Vs Post | Yoga Nidra | 5.86 | 11 | *** |
| | Bio Feedback | 5.49 | 11 | *** |
| | Combined | 6.24 | 11 | *** |
| | Control | 0.44 | 11 | NS |
| Pre Vs Follow-up | Yoga Nidra | 9.66 | 11 | *** |
| | Bio Feedback | 3.80 | 11 | ** |
| | Combined | 6.09 | 11 | *** |
| | Control | 0.57 | 11 | NS |
| Post Vs Follow-up | Yoga Nidra | 2.73 | 11 | * |
| | Bio Feedback | 2.50 | 11 | * |
| | Combined | 1.74 | 11 | NS |
| | Control | 1.02 | 11 | NS |

NS Not Significant, * Sig. at 0.05 level, ** Sig. at 0.01 level, *** Sig. at 0.001 level

The Paired t-values for the **Pre versus Post** comparisons are 5.86 for Yoga Nidra, 5.49 for Bio Feedback, 6.24 for the Combined group and 0.44 for the Control group. Each of the three interventions shows highly significant effect (0.001 level) whereas the effect in the Control group is not significant. The Paired t-values for the **Pre versus Follow-up** comparisons are 9.66 (sig. at 0.001 level) for Yoga Nidra, 3.80 (sig. at 0.01 level) for Bio Feedback, 6.09 (sig. at 0.001 level) for the Combined group and 0.57 (not sig.) for the Control group. The Paired t-values for the **Post versus Follow-up** comparisons are 2.73 (sig. at 0.05 level) for Yoga Nidra, 2.50 (sig. at 0.05 level) for Bio Feedback, 1.74 (not sig.) for the Combined group and 1.02 (not sig.) for the Control group.

TABLE 4.3D. ANCOVA on Post Respiration with Pre Respiration as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|-----------------------------|---------|----|--------|-------|---------|
| Covariate (Pre Respiration) | 111.18 | 1 | 111.18 | 37.31 | *** |
| Main Effects (Intervention) | 866.03 | 3 | 288.68 | | |
| Residual | 332.72 | 43 | 7.74 | | |
| Total | 1309.92 | 47 | 27.87 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 3.04

| Mean Post Respiration duly adjusted for Pre Respiration (rate/minute) | Intervention | YN | Co | BF | Ct |
|---|--------------|----|----|----|----|
| 17.50 | Yoga Nidra | | | | |
| 18.28 | Combined | | | | |
| 21.06 | Bio Feedback | * | * | | |
| 28.31 | Control | * | * | * | |

* Significant at 0.05 level

Homogeneous Subsets

1. Yoga Nidra and Combined
2. Bio Feedback
3. Control

F value for the Post Respiration (with Pre Respiration as covariate) is 37.31. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the drop in the adjusted Post Respiration rate in case of Yoga Nidra is similar to the drop in case of Combined intervention whereas the drop in case of Bio Feedback and the Control groups differs significantly with the other groups.

TABLE 4.3E. ANCOVA on Follow-up Respiration with Pre Respiration as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|-----------------------------|---------|----|--------|-------|---------|
| Covariate (Pre Respiration) | 246.85 | 1 | 246.85 | | |
| Main Effects (Intervention) | 468.20 | 3 | 156.07 | 22.47 | *** |
| Residual | 298.62 | 43 | 6.95 | | |
| Total | 1013.67 | 47 | 21.57 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 2.88

| Mean Follow-up Respiration duly adjusted for Pre Respiration (rate/minute) | Intervention | Co | YN | BF | Ct |
|--|--------------|----|----|----|----|
| 18.96 | Combined | | | | |
| 20.56 | Yoga Nidra | | | | |
| 22.88 | Bio Feedback | * | | | |
| 27.28 | Control | * | * | * | |

* Significant at 0.05 level

Homogeneous Subsets

1. Combined and Yoga Nidra
2. Yoga Nidra and Bio Feedback
3. Control

F value for the Follow-up Respiration (with Pre Respiration as covariate) is 22.47. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the Yoga Nidra can form a homogeneous subset either with the Combined or the Bio Feedback intervention. The Control group differs significantly from each of the three interventions. Also the Bio Feedback differs significantly from the Combined intervention.

TABLE 4.3F. ANCOVA on Follow-up Respiration with Post Respiration as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|---------------------------------|---------|----|--------|------|---------|
| Covariate (Post Respiration) | 680.54 | 1 | 680.54 | | |
| Main Effects (Intervention) | 38.36 | 3 | 12.79 | 1.87 | NS |
| Residual | 294.77 | 43 | 6.86 | | |
| Total | 1013.67 | 47 | 21.57 | | |

NS Not Significant

| Mean Follow-up Respiration duly adjusted for Post Respiration (rate/minute) | Intervention |
|---|--------------|
| 20.90 | Combined |
| 22.71 | Bio Feedback |
| 22.74 | Control |
| 23.33 | Yoga Nidra |

Homogeneous Subset

All interventions

F value for the Follow-up Respiration (with Post Respiration as covariate) is 1.87. It indicates that there is no significant differential effect of the interventions. Yoga Nidra, Bio Feedback, Combined and the Control group - all form a single homogeneous set.

DISCUSSION on RESPIRATION RATE

The MANOVA-RM results for Respiration rate are presented in the tables above. These results indicate highly significant *Intrasubject* (within the group) and *Intersubject* (among the groups) differences in the Respiration rate. Paired t-tests and ANCOVAs (followed with Tukey's post hoc comparisons) were carried out at three levels (Pre-Post, Post-Follow-up and Pre-Follow-up), to study the kind of differential impact of the intervention techniques.

Pre-Post comparisons

The readings of Respiration rate show an average fall of about 10 cy/min in Yoga Nidra group, 4 cy/min in Bio Feedback group, 8 cy/min in Combined group and 1 cy/min in the Control group. The paired t-tests indicate highly significant reduction in the Respiration rate in all the intervention groups whereas the reduction in Respiration rate in the Control group is not significant. The ANCOVA confirms the differential impact of interventions at this level. So the null hypothesis "*There will be no differential impact of the intervention techniques on Respiration rate (cy/min)*" is rejected at Pre-Post level. The Post Hoc comparisons after the ANCOVAs give the precise differences, which reveal that the Yoga Nidra and Combined intervention groups show maximum and similar impact. The Bio Feedback intervention group shows minimum reduction in Respiration rate. There is no improvement in the Control group.

Pre-Follow-up comparisons

At this level, i.e., when before intervention Respiration rates are compared with the readings taken two months after the intervention, there is an average fall of about 7 cy/min in Yoga Nidra group, 4 cy/min in Bio Feedback group, 8 cy/min in Combined group and 1 cy/min in the Control group. The paired t-tests indicate highly significant reduction in the Respiration rate in Yoga Nidra and Combined intervention groups. The Bio Feedback group shows border-line reduction in the Respiration rate. The Control group shows no significant change in the Respiration rate. The ANCOVA confirms the differential impact of interventions at this level also. So the null hypothesis "*There will*

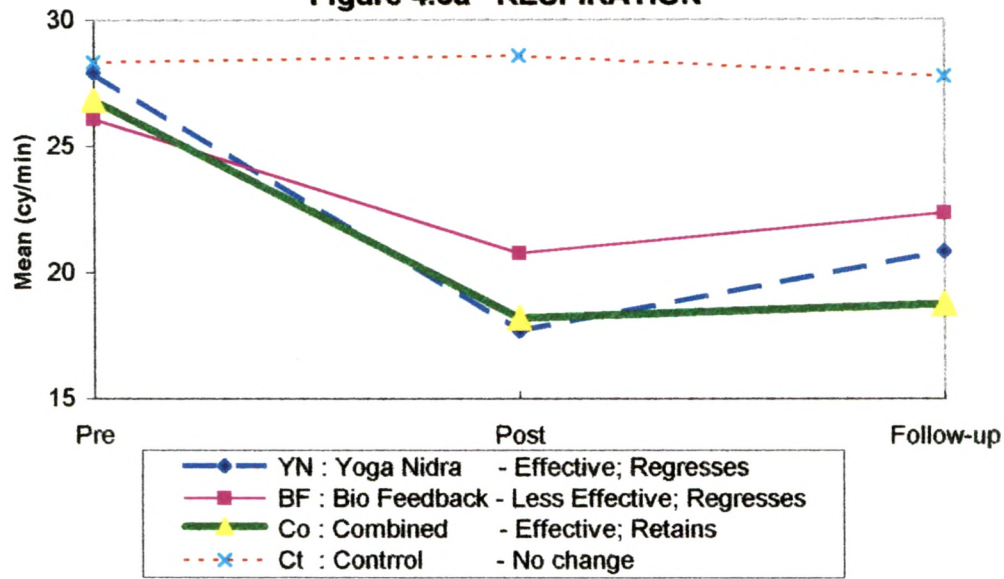
be no differential impact of the intervention techniques on Respiration rate cy/min” is rejected at Pre-Follow-up level. When precise differences are brought out by **post hoc** comparisons, Combined and Yoga Nidra intervention group show maximum impact in Respiration rate. The reduction in Respiration rate is lesser in the Bio Feedback group and least in the Control groups.

Post-Follow-up comparisons

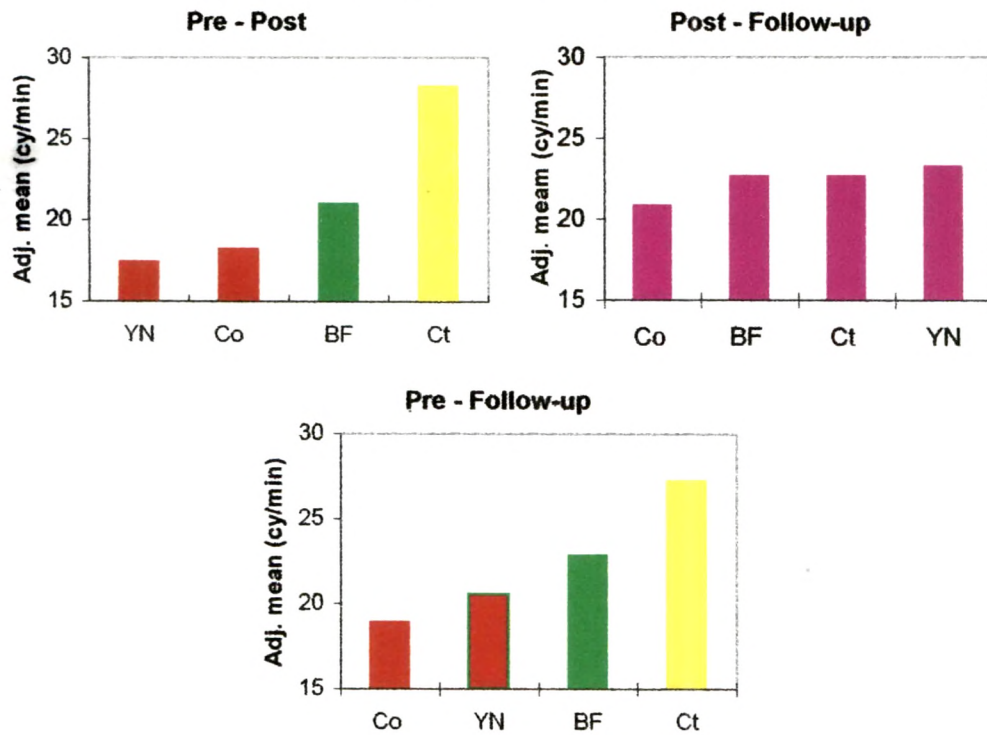
The comparison between immediate impact of interventions and the impact of interventions after two months, shows that the average Respiration rate of the subjects in Yoga Nidra group increased by about 3 cy/min. In Bio Feedback group it increased by 2 cy/min. The Combined and Control groups show no change. The **paired t-tests** show highly significant rise in Respiration rate in case of Yoga Nidra and Bio Feedback groups. The change in the rate of respiration in the Combined and Control groups is not significant. At Follow-up (two months after the interventions), it was observed that the impact of Combined intervention was retained for the rate of respiration whereas the effect of intervention in all other groups, shows mild regression. The **ANCOVA** does not show differential impact of the interventions at this level. So the null hypothesis “*There will be no differential impact of the intervention techniques on Respiration rate(cy/min)*” is accepted at Post-Follow-up level.

Variations in Respiratory rates from Pre to Post and Follow-up stages as well as variations in adjusted Respiratory rates in the three Post Hoc comparisons are depicted graphically in Figure 4.3a. The trends in Respiratory rates during 18 intervention sessions are depicted in Figure 4.3b.

Figure 4.3a RESPIRATION

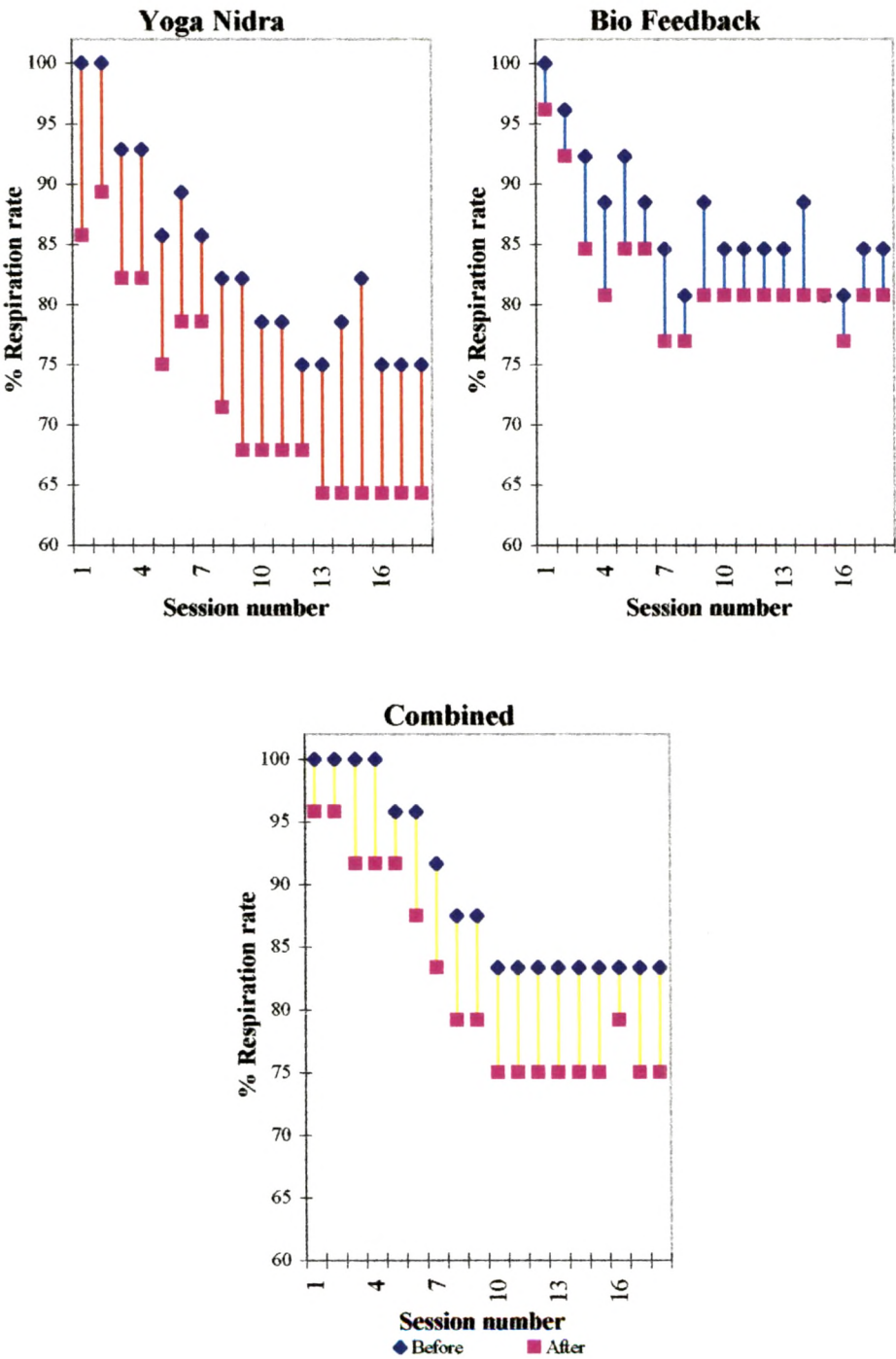


Post Hoc Comparisons



Interventions forming a homogeneous subset at a level are indicated by the same colour

Figure 4.3b Trend of RESPIRATION at Intervention Sessions



4.4. Analysis of HAMILTON'S ANXIETY SCORE (HAS)

TABLE 4.4A. Means and Standard Deviations of HAS

| Intervention | N | Pre | | Post | | Follow-up | |
|---------------|----|-------|------|-------|-------|-----------|-------|
| | | Mean | SD | Mean | SD | Mean | SD |
| Yoga Nidra | 12 | 33.83 | 4.57 | 3.92 | 2.61 | 10.25 | 4.00 |
| Bio Feedback | 12 | 30.75 | 2.42 | 18.50 | 4.70 | 23.50 | 5.55 |
| Combined | 12 | 31.17 | 2.82 | 3.33 | 2.27 | 6.25 | 2.73 |
| Control | 12 | 26.83 | 3.38 | 31.50 | 2.43 | 32.08 | 2.43 |
| Entire Sample | 48 | 30.65 | 4.14 | 14.31 | 12.15 | 18.02 | 11.09 |

TABLE 4.4B. Multiple Analysis of Variance for Repeated Measures (MANOVA-RM) on Pre, Post and Follow-up Measures of HAS

| Pillai's Multivariate Tests | Pillai's Value | Hypoth df | Error df | Approx. F | Remarks |
|-----------------------------|----------------|-----------|----------|-----------|---------|
| HAS | 0.95150 | 2 | 43 | 421.79 | *** |
| Intervention By HAS | 1.24177 | 6 | 88 | 24.02 | *** |
| Univariate F-tests | SS | df | MS | F | Remarks |
| Within Cells | 576.78 | 88 | 6.55 | | |
| HAS | 7038.72 | 2 | 3519.36 | 536.96 | *** |
| Intervention By HAS | 5651.83 | 6 | 941.97 | 143.72 | *** |

*** Significant at 0.001 level

The first F value in the Pillai's Multivariate Table is 421.79 it indicates that there is a highly significant (0.001 level) variation in the HAS between the three measures, taking all interventions together. The corresponding Univariate F value is 536.96, which confirms the same. The second F value in the Pillai's Multivariate Table is 24.02. It indicates that there is a highly significant (0.001 level) variation in the HAS between the interventions and the three measures. The corresponding Univariate F value is 143.72, which confirms the same.

TABLE 4.4C. Paired t-test Analysis for Repeated Measures on HAS

| Comparison | Intervention | t-value | df | Remarks |
|-------------------|--------------|---------|----|---------|
| Pre Vs Post | Yoga Nidra | 21.36 | 11 | *** |
| | Bio Feedback | 9.53 | 11 | *** |
| | Combined | 29.23 | 11 | *** |
| | Control | 5.83 | 11 | *** |
| Pre Vs Follow-up | Yoga Nidra | 15.42 | 11 | *** |
| | Bio Feedback | 5.37 | 11 | *** |
| | Combined | 29.70 | 11 | *** |
| | Control | 4.86 | 11 | *** |
| Post Vs Follow-up | Yoga Nidra | 6.37 | 11 | *** |
| | Bio Feedback | 7.30 | 11 | *** |
| | Combined | 5.84 | 11 | *** |
| | Control | 1.29 | 11 | NS |

NS Not Significant, * Sig. at 0.05 level, ** Sig. at 0.01 level, *** Sig. at 0.001 level

The Paired t-values for the **Pre versus Post** comparisons are 21.36 for Yoga Nidra, 9.53 for Bio Feedback, 29.23 for the Combined group and 5.83 for the Control group. All of these are significant at 0.001 level. The Paired t-values for the **Pre versus Follow-up** comparisons are 15.42 for Yoga Nidra, 5.37 for Bio Feedback, 29.70 for the Combined group and 4.86 for the Control group. All of these are significant at 0.001 level. The Paired t-values for the **Post versus Follow-up** comparisons are 6.37 (sig. at 0.001 level) for Yoga Nidra, 7.30 (sig. at 0.001 level) for Bio Feedback, 5.84 (sig. at 0.001 level) for the Combined group and 1.29 (not sig.) for the Control group.

TABLE 4.4D. ANCOVA on Post HAS with Pre HAS as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|-----------------------------|---------|----|---------|--------|---------|
| Covariate (Pre HAS) | 1539.73 | 1 | 1539.73 | | |
| Main Effects (Intervention) | 4993.70 | 3 | 1664.57 | 176.78 | *** |
| Residual | 404.89 | 43 | 9.42 | | |
| Total | 6938.31 | 47 | 147.62 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 3.36

| Mean Post HAS duly adjusted for Pre HAS (score) | Intervention | YN | Co | BF | Ct |
|--|-----------------|----|----|----|----|
| 3.08 | Yoga Nidra | | | | |
| 3.19 | Combined | | | | |
| 18.47 | Bio Feedback | * | * | | |
| 32.49 | Control | * | * | * | |

* Significant at 0.05 level

Homogeneous Subsets

1. Yoga Nidra and Combined
2. Bio Feedback
3. Control

F value for the Post HAS (with Pre HAS as covariate) is 176.78. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the drop in the adjusted Post HAS in case of Yoga Nidra is similar to the drop in case of Combined intervention whereas the drop in case of Bio Feedback and the Control groups differs significantly with the other groups.

TABLE 4.4E. ANCOVA on Follow-up HAS with Pre HAS as covariate.

| Source of Variation | SS | df | MS | F | Remarks |
|-----------------------------|---------|----|---------|--------|---------|
| Covariate (Pre HAS) | 834.54 | 1 | 834.54 | 105.13 | *** |
| Main Effects (Intervention) | 4354.71 | 3 | 1451.57 | | |
| Residual | 593.72 | 43 | 13.81 | | |
| Total | 5782.98 | 47 | 123.04 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 4.07

| Mean Follow-up HAS duly adjusted for Pre HAS (score) | Intervention | Co | YN | BF | Ct |
|---|-----------------|----|----|----|----|
| 6.06 | Combined | | | | |
| 9.46 | Yoga Nidra | | | | |
| 23.46 | Bio Feedback | * | * | | |
| 33.49 | Control | * | * | * | |

* Significant at 0.05 level

Homogeneous Subsets

1. Combined and Yoga Nidra
2. Bio Feedback
3. Control

F value for the Follow-up HAS (with Pre HAS as covariate) is 105.13. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the drop in the adjusted Follow-up HAS in case of Yoga Nidra is similar to the drop in case of Combined intervention whereas the drop in case of Bio Feedback and the Control groups differs significantly with the other groups.

TABLE 4.4F. ANCOVA on Follow-up HAS with Post HAS as covariate.

| Source of Variation | SS | df | MS | F | Remarks |
|-----------------------------|---------|----|---------|------|---------|
| Covariate (Post HAS) | 5399.41 | 1 | 5399.41 | | |
| Main Effects (Intervention) | 131.57 | 3 | 43.86 | 7.48 | *** |
| Residual | 252.00 | 43 | 5.86 | | |
| Total | 5782.98 | 47 | 123.04 | | |

NS Not Significant

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 2.65

| Mean Follow-up HAS duly adjusted for Post HAS (score) | Intervention | Ct | Co | BF | YN |
|--|--------------|----|----|----|----|
| 15.47 | Control | | | | |
| 16.86 | Combined | | | | |
| 19.45 | Bio Feedback | * | | | |
| 20.29 | Yoga Nidra | * | * | | |

* Significant at 0.05 level

Homogeneous Subsets

1. Control and Combined
2. Bio Feedback and Yoga Nidra

F value for the Follow-up HAS (with Pre HAS as covariate) is 7.48. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the drop in the adjusted Follow-up HAS in case of Control was similar to the drop in case of Combined intervention. The drop in case of Bio Feedback and the Yoga Nidra interventions, is similar. The Control group differs significantly from the Bio Feedback and Yoga Nidra interventions. The Combined intervention differs significantly from the Yoga Nidra interventions.

DISCUSSION on HAMILTON'S ANXIETY SCORE (HAS)

The MANOVA-RM results for HAS are presented in the tables above. These results indicate highly significant *Intrasubject* (within the group) and *Intersubject* (among the groups) differences in the HAS. Paired t-tests and ANCOVAs (followed with Tukey's post hoc comparisons) were carried out at three levels (Pre-Post, Post-Follow-up and Pre-Follow-up), to study the kind of differential impact of the intervention techniques.

Pre-Post comparisons

The Anxiety scores show an average decrease of about 30 points in Yoga Nidra group, 12 points in Bio Feedback group and 27 points in Combined group; increase of about 4 points in the Control group. The **paired t-tests** indicate highly significant reduction in the anxiety in all the intervention groups whereas the increment in anxiety in the Control group is highly significant. The ANCOVA confirms the differential impact of interventions at this level. So the null hypothesis "*There will be no differential impact of the intervention techniques on level of Anxiety*" is rejected at Pre-Post level. The **Post Hoc** comparisons after the ANCOVAs give the precise differences, which reveal that the Yoga Nidra and Combined intervention groups show maximum and similar impact. The Bio Feedback intervention group shows minimum reduction in anxiety. The Control group shows deterioration.

Pre-Follow-up comparisons

At this level, i.e., when the before intervention anxiety scores are compared with the readings taken two months after the intervention, the average fall was about 23 points in Yoga Nidra group, 7 points in Bio Feedback group, 24 points in Combined group. The anxiety score has increased by about 5 points in the Control group. The **paired t-tests** indicate highly significant reduction in the anxiety in all three intervention groups. The Control group shows significant increment in anxiety. The ANCOVA confirms the differential impact of interventions at this level also. So the null hypothesis "*There will be no differential impact of the intervention techniques on level of Anxiety*" is rejected at Pre-Follow-up level. When precise differences are brought out by **post hoc** comparisons,

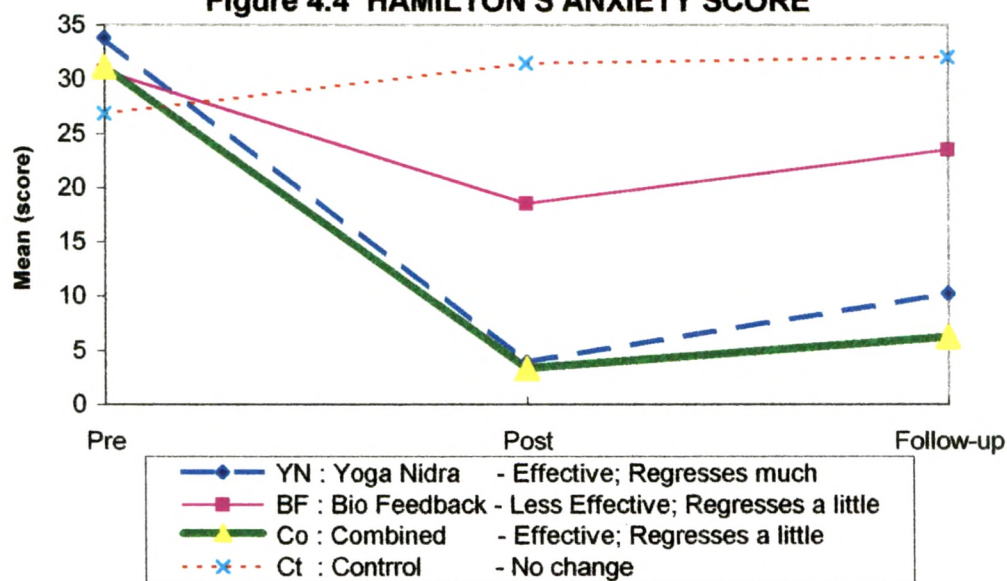
Combined and Yoga Nidra intervention groups show maximum and similar impact on anxiety. The reduction in anxiety is lesser in the Bio Feedback group. Anxiety has increased in Control groups.

Post-Follow-up comparisons

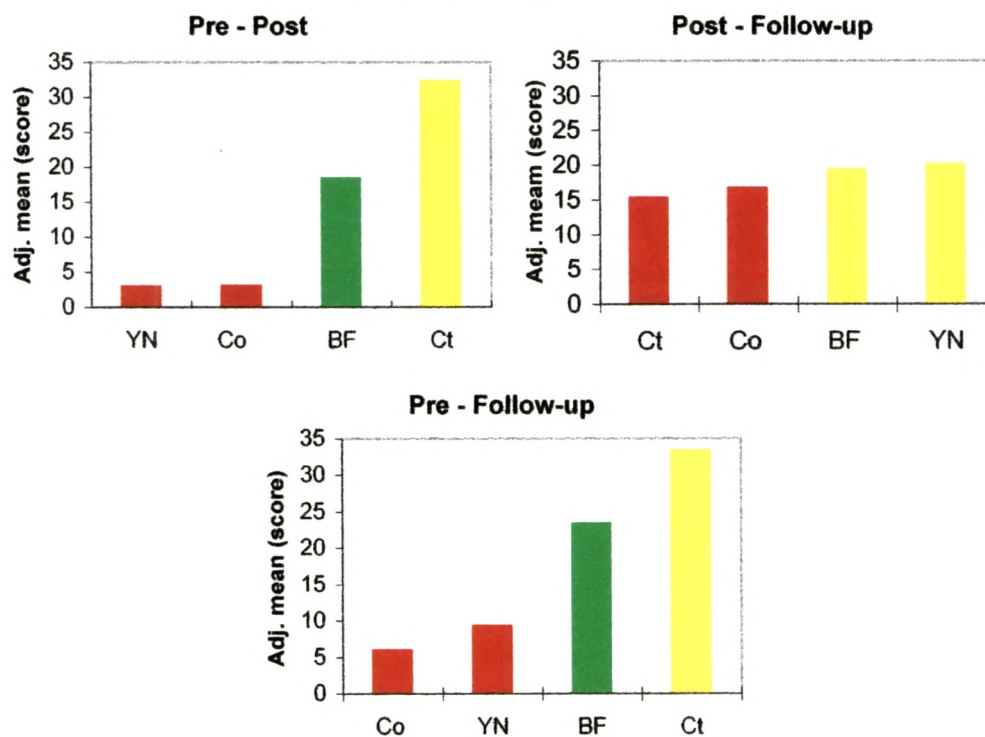
The comparison between immediate impact of interventions and the impact of interventions after two months, shows that the average anxiety scores of the subjects in Yoga Nidra group increased by about 6 points. In Bio Feedback group it increased by 5 points. In the Combined group it increased by 3 points. Control group shows almost no change. The paired t-tests show highly significant rise in anxiety in all the three intervention groups. At Follow-up (two months after the interventions), none of the interventions show carryover impact. The ANCOVA confirms the differential impact of interventions at this level also. So the null hypothesis "*There will be no differential impact of the intervention techniques on Anxiety*" is rejected at Post-Follow-up level. Through Post Hoc comparison, when we look at the precise differences, it is seen that the Combined Intervention groups shows maximum rate of regression in anxiety followed by Yoga Nidra and Bio Feedback intervention groups.

Variations in Anxiety scores from Pre to Post and Follow-up stages as well as variations in adjusted Anxiety scores in three Post Hoc comparisons are depicted graphically in Figure 4.4.

Figure 4.4 HAMILTON'S ANXIETY SCORE



Post Hoc Comparisons



Interventions forming a homogeneous subset at a level are indicated by the same colour

4.5. Analysis of HAMILTON'S DEPRESSION SCORE (HDS)

TABLE 4.5A. Means and Standard Deviations of HDS

| Intervention | N | Pre | | Post | | Follow-up | |
|---------------|----|-------|------|-------|-------|-----------|------|
| | | Mean | SD | Mean | SD | Mean | SD |
| Yoga Nidra | 12 | 31.08 | 4.08 | 3.25 | 3.60 | 7.83 | 3.30 |
| Bio Feedback | 12 | 27.17 | 2.66 | 14.33 | 5.57 | 18.83 | 5.08 |
| Combined | 12 | 26.75 | 2.80 | 2.58 | 1.73 | 6.50 | 2.15 |
| Control | 12 | 23.00 | 2.95 | 27.67 | 3.58 | 28.58 | 3.66 |
| Entire Sample | 48 | 27.00 | 4.22 | 11.96 | 10.96 | 15.44 | 9.75 |

TABLE 4.5B. MANOVA-RM on Pre, Post and Follow-up Measures of HDS

| Pillai's Multivariate Tests | Pillai's Value | Hypoth. df | Error df | Approx. F | Remarks |
|-----------------------------|----------------|------------|----------|-----------|---------|
| HDS | 0.95563 | 2 | 43 | 463.04 | *** |
| Intervention By HDS | 1.05740 | 6 | 88 | 16.45 | *** |
| Univariate F-tests | SS | df | MS | F | Remarks |
| Within Cells | 408.50 | 88 | 4.64 | | |
| HDS | 5952.76 | 2 | 2976.38 | 641.18 | *** |
| Intervention By HDS | 4662.74 | 6 | 777.12 | 167.41 | *** |

*** Significance at 0.001 level

The first F value in the Pillai's Multivariate Table is 463.04 it indicates that there is a highly significant (0.001 level) variation in the HDS between the three measures, taking all interventions together. The corresponding Univariate F value is 641.18, which confirms the same. The second F value in the Pillai's Multivariate Table is 16.45. It indicates that there is a highly significant (0.001 level) variation in the HDS between the interventions and the three measures. The corresponding Univariate F value is 167.41, which confirms the same.

TABLE 4.5C. Paired t-test Analysis for Repeated Measures on HDS

| Comparison | Intervention | t-value | df | Remarks |
|-------------------|--------------|---------|----|---------|
| Pre Vs Post | Yoga Nidra | 26.68 | 11 | *** |
| | Bio Feedback | 9.08 | 11 | *** |
| | Combined | 39.40 | 11 | *** |
| | Control | 7.69 | 11 | *** |
| Pre Vs Follow-up | Yoga Nidra | 21.23 | 11 | *** |
| | Bio Feedback | 6.69 | 11 | *** |
| | Combined | 25.97 | 11 | *** |
| | Control | 7.73 | 11 | *** |
| Post Vs Follow-up | Yoga Nidra | 4.91 | 11 | *** |
| | Bio Feedback | 7.10 | 11 | *** |
| | Combined | 11.65 | 11 | *** |
| | Control | 2.11 | 11 | NS |

NS Not Significant, * Sig. at 0.05 level, ** Sig. at 0.01 level, *** Sig. at 0.001 level

The Paired t-values for the **Pre versus Post** comparisons are 26.68 for Yoga Nidra, 9.08 for Bio Feedback, 39.40 for the Combined group and 7.69 for the Control group. All of these are significant at 0.001 level. The Paired t-values for the **Pre versus Follow-up** comparisons are 21.23 for Yoga Nidra, 6.69 for Bio Feedback, 25.97 for the Combined group and 7.73 for the Control group. All of these are significant at 0.001 level. The Paired t-values for the **Post versus Follow-up** comparisons are 4.91 (sig. at 0.001 level) for Yoga Nidra, 7.10 (sig. at 0.001 level) for Bio Feedback, 11.65 (sig. at 0.001 level) for the Combined group and 2.11 (not sig.) for the Control group.

TABLE 4.5D. ANCOVA on Post HDS with Pre HDS as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|-----------------------------|---------|----|---------|--------|---------|
| Covariate (Pre HDS) | 866.27 | 1 | 866.27 | 135.53 | *** |
| Main Effects (Intervention) | 4326.12 | 3 | 1442.04 | | |
| Residual | 457.53 | 43 | 10.64 | | |
| Total | 5649.92 | 47 | 120.21 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 3.57

| Mean Post HDS duly adjusted for Pre HDS (score) | Intervention | YN | Co | BF | Ct |
|--|--------------|----|----|----|----|
| 0.51 | Yoga Nidra | | | | |
| 2.75 | Combined | | | | |
| 14.22 | Bio Feedback | * | * | | |
| 30.35 | Control | * | * | * | |

* Significant at 0.05 level

Homogeneous Subsets

1. Yoga Nidra and Combined
2. Bio Feedback
3. Control

F value for the Post HDS (with Pre HDS as covariate) is 135.53. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the drop in the adjusted Post HDS in case of Yoga Nidra is similar to the drop in case of Combined intervention whereas the drop in case of Bio Feedback and the Control groups differs significantly with the other groups.

TABLE 4.5E. ANCOVA on Follow-up HDS with Pre HDS as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|-----------------------------|---------|----|---------|--------|---------|
| Covariate (Pre HDS) | 592.84 | 1 | 592.84 | 111.41 | *** |
| Main Effects (Intervention) | 3431.50 | 3 | 1143.83 | | |
| Residual | 441.47 | 43 | 10.27 | | |
| Total | 4465.81 | 47 | 95.02 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 3.51

| Mean Follow-up HDS duly adjusted for Pre HDS (score) | Intervention | YN | Co | BF | Ct |
|---|--------------|----|----|----|----|
| 5.38 | Yoga Nidra | | | | |
| 6.65 | Combined | | | | |
| 18.74 | Bio Feedback | * | * | | |
| 30.99 | Control | * | * | * | |

* Significant at 0.05 level

Homogeneous Subsets

1. Yoga Nidra and Combined
2. Bio Feedback
3. Control

F value for the Follow-up HDS (with Pre HDS as covariate) is 111.41. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the drop in the adjusted Follow-up HDS in case of Yoga Nidra is similar to the drop in case of Combined intervention whereas the drop in case of Bio Feedback and the Control groups differs significantly with the other groups.

TABLE 4.5F. ANCOVA on Follow-up HDS with Post HDS as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|-----------------------------|---------|----|---------|------|---------|
| Covariate (Post HDS) | 4249.40 | 1 | 4249.40 | | |
| Main Effects (Intervention) | 35.00 | 3 | 11.67 | 2.77 | NS |
| Residual | 181.41 | 43 | 4.22 | | |
| Total | 4465.81 | 47 | 95.02 | | |

NS Not Significant

| Mean Follow-up HDS duly adjusted for Post HDS (score) | Intervention |
|--|--------------|
| 14.00 | Combined |
| 14.80 | Yoga Nidra |
| 16.02 | Control |
| 16.94 | Bio Feedback |

Homogeneous Subset

All interventions

F value for the Follow-up HDS (with Post HDS as covariate) is 2.77. It indicates that there is no significant differential effect of the interventions. Yoga Nidra, Bio Feedback, Combined and the Control group - all form a single homogeneous set.

DISCUSSION on HAMILTON'S DEPRESSION SCORE (HDS)

The MANOVA-RM results for HDS are presented in the tables above. These results indicate highly significant *Intrasubject* (within the group) and *Intersubject* (among the groups) differences in the Depression scores. Paired t-tests and ANCOVAs (followed with Tukey's post hoc comparisons) were carried out at three levels (Pre-Post, Post-Follow-up and Pre-Follow-up), to study the kind of differential impact of the intervention techniques.

Pre-Post comparisons

The Depression scores show an average fall of about 28 points in Yoga Nidra group, 13 points in Bio Feedback group, 24 points in Combined group and a rise of about 5 points in the Control group. The paired t-tests indicate highly significant reduction in the Depression in all the intervention groups whereas the increment in Depression is significant in the Control group. The ANCOVA confirms the differential impact of interventions at this level. So the null hypothesis "*There will be no differential impact of the intervention techniques on Depression*" is rejected at Pre-Post level. The Post Hoc comparisons after the ANCOVAs give the precise differences, which reveal that the Yoga Nidra and Combined intervention groups show maximum and similar impact. The impact of Bio Feedback intervention is comparatively less. There is no improvement in the Control group.

Pre-Follow-up comparisons

At this level, i.e., when the before intervention Depression scores are compared with the readings taken two months after the intervention, the average fall was about 23 points in Yoga Nidra group, 8 points in Bio Feedback group, 20 points in Combined group. The Depression scores increased by about 5 points in the Control group. The paired t-tests indicate highly significant reduction in the Depression in all the three intervention groups. The Control group shows highly significant increment in Depression. The ANCOVA confirms the differential impact of the interventions at this level also. So the null hypothesis "*There will be no differential impact of the intervention techniques on*

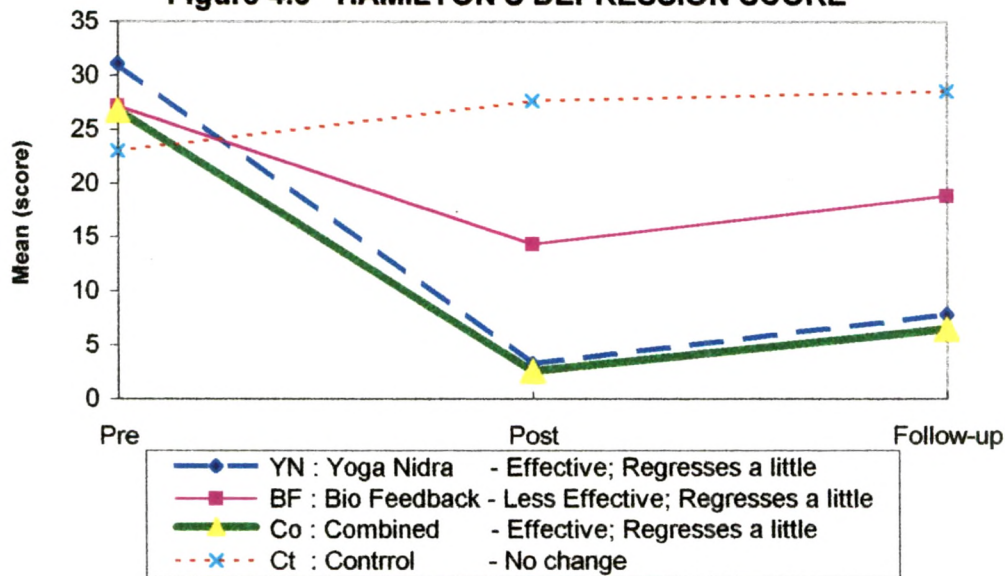
Depression” is rejected at Pre-Follow-up level. When precise differences are brought out by **post hoc** comparisons, the Yoga Nidra and Combined intervention groups show maximum and similar impact in Depression. The reduction in Depression is lesser the Bio Feedback group. There is an increase in Depression in the Control group.

Post-Follow-up comparisons

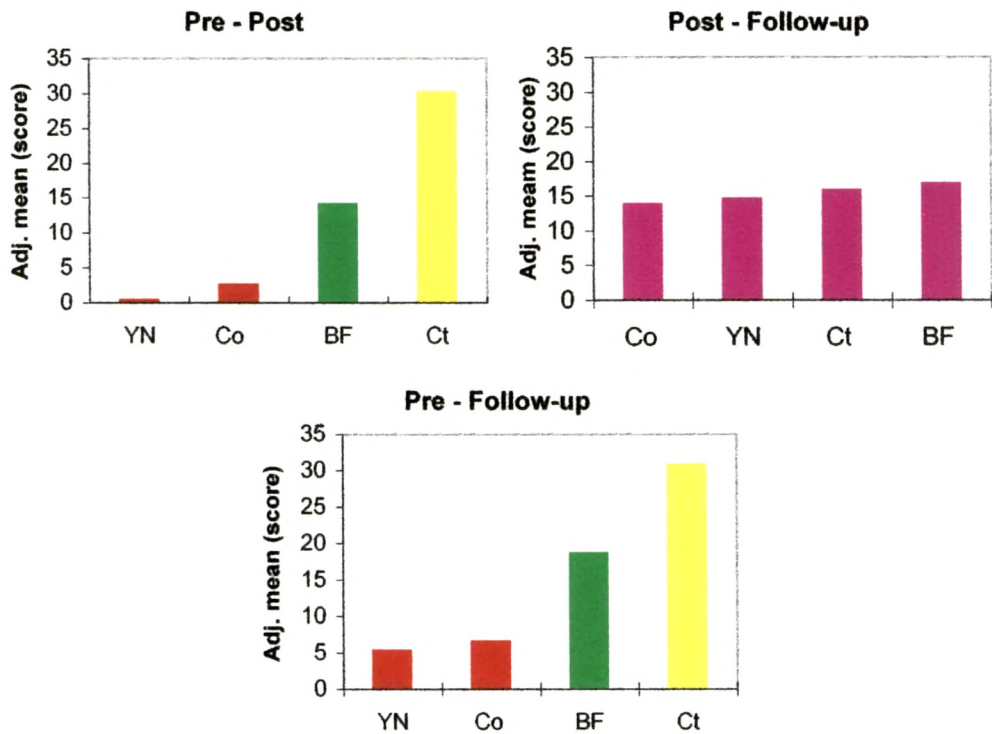
The comparison between immediate impact of interventions and the impact of interventions after two months, shows that the average Depression score of the subjects in Yoga Nidra group increased by about 2 points. In Bio Feedback group it increased by about 5 points. In the Combined group it increased by 4 points. In the Control groups it remained almost the same. The **paired t-tests** show highly significant rise in Depression in case of all the three intervention groups. The Control group shows no significant change in Depression. Follow-up comparison (two months after the interventions) shows there is a regression in improvement in all the three intervention groups. The **ANCOVA** shows that there is no differential impact of interventions at this level. So the null hypothesis “*There will be no differential impact of the intervention techniques on Depression*” is accepted at Post-Follow-up level.

Variations in Depression scores from Pre to Post and Follow-up stages as well as variations in adjusted Depression scores in three Post Hoc comparisons are depicted graphically in Figure 4.5.

Figure 4.5 HAMILTON'S DEPRESSION SCORE



Post Hoc Comparisons



Interventions forming a homogeneous subset at a level are indicated by the same colour

4.6 Analysis of POSITIVE TASK ORIENTED COPING STYLE (PTO Coping Style)

TABLE 4.6A. Means and Standard Deviations of PTO Coping Style scores

| Intervention | N | Pre score | | Post score | | Follow-up score | |
|---------------|----|-----------|------|------------|------|-----------------|------|
| | | Mean | SD | Mean | SD | Mean | SD |
| Yoga Nidra | 12 | 6.50 | 1.78 | 11.67 | 2.90 | 11.25 | 2.73 |
| Bio Feedback | 12 | 7.17 | 2.79 | 9.17 | 2.89 | 9.25 | 3.25 |
| Combined | 12 | 8.00 | 3.44 | 12.83 | 2.55 | 13.42 | 1.88 |
| Control | 12 | 7.75 | 2.60 | 7.83 | 2.59 | 7.83 | 2.21 |
| Entire Sample | 48 | 7.35 | 2.69 | 10.37 | 3.32 | 10.44 | 3.27 |

TABLE 4.6B. MANOVA-RM on Pre, Post and Follow-up Measures of PTO Coping Style

| Pillai's Multivariate Tests | Pillai's Value | Hypoth. df | Error df | Approx . F | Remarks |
|----------------------------------|----------------|------------|----------|------------|---------|
| PTO Coping Style | 0.73217 | 5 | 43 | 58.78 | *** |
| Intervention By PTO Coping Style | 0.64858 | 6 | 88 | 7.04 | *** |
| Univariate F-tests | SESSIONS | df | MS | F | Remarks |
| Within Cells | 142.67 | 88 | 1.62 | | |
| PTO Coping Style | 298.18 | 2 | 149.09 | 91.96 | *** |
| Intervention By PTO Coping Style | 145.15 | 6 | 24.19 | 14.92 | *** |

*** Significant at 0.001 level

The first F value in the Pillai's Multivariate Table is 58.78 it indicates that there is a highly significant (0.001 level) variation in the PTO Coping Style between the three measures, taking all interventions together. The corresponding Univariate F value is 91.96, which confirms the same. The second F value in the Pillai's Multivariate Table is 7.03. It indicates that there is a highly significant (0.001 level) variation in the PTO Coping Style between the interventions and the three measures. The corresponding Univariate F value is 14.92, which confirms the same.

TABLE 4.6C. Paired t-test Analysis for Repeated Measures on PTO Coping Style

| Comparison | Intervention | t-value | df | Remarks |
|-------------------|--------------|---------|----|---------|
| Pre Vs Post | Yoga Nidra | 6.01 | 11 | *** |
| | Bio Feedback | 7.27 | 11 | *** |
| | Combined | 8.22 | 11 | *** |
| | Control | 0.22 | 11 | NS |
| Pre Vs Follow-up | Yoga Nidra | 6.02 | 11 | *** |
| | Bio Feedback | 5.23 | 11 | *** |
| | Combined | 7.19 | 11 | *** |
| | Control | 0.29 | 11 | NS |
| Post Vs Follow-up | Yoga Nidra | 0.89 | 11 | NS |
| | Bio Feedback | 0.32 | 11 | NS |
| | Combined | 1.47 | 11 | NS |
| | Control | 0.00 | 11 | NS |

NS Not Significant, * Sig. at 0.05 level, ** Sig. at 0.01 level, *** Sig. at 0.001 level

The Paired t-values for the **Pre versus Post** comparisons are 6.01 (sig. at 0.001 level) for Yoga Nidra, 7.27 (sig. at 0.001 level) for Bio Feedback, 8.22 (sig. at 0.001 level) for the Combined group and 0.22 (not sig.) for the Control group. The Paired t-values for the **Pre versus Follow-up** comparisons are 6.02 (sig. at 0.001 level) for Yoga Nidra, 5.23 (sig. at 0.001) for Bio Feedback, 7.19 (sig. at 0.001 level) for the Combined group and 0.29 (not sig.) for the Control group. The Paired t-values for the **Post versus Follow-up** comparisons are 0.89 for Yoga Nidra, 0.32 for Bio Feedback, 1.47 for the Combined group and 0.00 for the Control group. None of these is significant.

TABLE 4.6D. Analysis of Covariance (ANCOVA) on Post PTO Coping Style with Pre PTO Coping Style as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|----------------------------------|--------|----|--------|-------|---------|
| Covariate (Pre PTO Coping Style) | 165.60 | 1 | 165.60 | | |
| Main Effects (Intervention) | 200.99 | 3 | 67.00 | 19.12 | *** |
| Residual | 150.66 | 43 | 3.50 | | |
| Total | 517.25 | 47 | 11.01 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 2.05

| Mean Post PTO Coping Style duly adjusted for Pre PTO Coping Style (score) | Intervention | Ct | BF | YN | Co |
|---|--------------|----|----|----|----|
| 7.54 | Control | | | | |
| 9.31 | Bio Feedback | | | | |
| 12.31 | Yoga Nidra | * | * | | |
| 12.36 | Combined | * | * | | |

* Significant at 0.05 level

Homogeneous Subsets

1. Control and Bio Feedback
2. Yoga Nidra and Combined

F value for the Post PTO Coping Style (with Pre PTO Coping Style as covariate) is 19.12. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the drop in the adjusted Post PTO Coping Style score in case of Control was similar to the drop in case of Bio Feedback intervention. The drop in case of Yoga Nidra and the Combined interventions is similar. Each of the Yoga Nidra and Combined interventions differs significantly from the Control and Bio Feedback interventions.

TABLE 4.6E. Analysis of Covariance (ANCOVA) on Follow-up PTO Coping Style with Pre PTO Coping Style as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|----------------------------------|--------|----|--------|-------|---------|
| Covariate (Pre PTO Coping Style) | 140.10 | 1 | 140.10 | | |
| Main Effects (Intervention) | 212.92 | 3 | 70.97 | 20.24 | *** |
| Residual | 150.79 | 43 | 3.51 | | |
| Total | 503.81 | 47 | 10.72 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 2.05

| Mean Follow-up PTO Coping Style duly adjusted for Pre PTO Coping Style (score) | Intervention | Ct | BF | YN | Co |
|---|--------------|----|----|----|----|
| 7.58 | Control | | | | |
| 9.38 | Bio Feedback | | | | |
| 11.81 | Yoga Nidra | * | * | | |
| 12.99 | Combined | * | * | | |

* Significant at 0.05 level

Homogeneous Subsets

1. Control and Bio Feedback
2. Yoga Nidra and Combined

F value for the Follow-up PTO Coping Style (with Pre PTO Coping Style as covariate) is 20.34. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the drop in the adjusted Follow-up PTO Coping Style score in case of Control was similar to the drop in case of Bio Feedback intervention. The drop in case of Yoga Nidra and the Combined interventions is similar. Each of the Yoga Nidra and Combined interventions, differs significantly from the Control and Bio Feedback interventions.

TABLE 4.6F. Analysis of Covariance (ANCOVA) on Follow-up PTO Coping Style with Post PTO Coping Style as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|-----------------------------------|--------|----|--------|------|---------|
| Covariate (Post PTO Coping Style) | 434.60 | 1 | 434.60 | | |
| Main Effects (Intervention) | 10.88 | 3 | 3.63 | 2.67 | NS |
| Residual | 58.34 | 43 | 1.36 | | |
| Total | 503.81 | 47 | 10.72 | | |

NS Not Significant

| Mean Follow-up PTO Coping Style duly adjusted for Post PTO Coping Style (score) | Intervention |
|--|--------------|
| 9.97 | Control |
| 10.17 | Yoga Nidra |
| 10.27 | Bio Feedback |
| 11.35 | Combined |

Homogeneous Subsets

All interventions

F value for the Follow-up PTO Coping Style (with Post PTO Coping Style as covariate) is 2.67. It indicates that there is no significant differential effect of the interventions. Yoga Nidra, Bio Feedback, Combined and the Control group - all form a single homogeneous set.

DISCUSSION on Positive Task Oriented Coping Style

The MANOVA-RM results for PTO Coping Style are presented in the tables above. These results indicate highly significant *Intrasubject* (within the group) and *Intersubject* (among the groups) differences in the PTO Coping Style. Paired t-tests and ANCOVAs (followed with Tukey's post hoc comparisons) were carried out at three levels (Pre-Post, Post-Follow-up and Pre-Follow-up), to study the kind of differential impact of the intervention techniques.

Pre-Post comparisons

The readings of PTO Coping Style scores show an average increase of about 5 points in Yoga Nidra group, 2 points in Bio Feedback group, 5 points in Combined group. There is no change in the Control group. The **paired t-tests** indicate highly significant increment in the PTO Coping Style score in all the three intervention groups whereas the change in PTO Coping Style score in the Control group is not significant. The ANCOVA confirms the differential impact of interventions at this level. So the null hypothesis "*There will be no differential impact of the intervention techniques on Positive Task Oriented Coping Style*" is rejected at Pre-Post level. The **Post Hoc** comparisons after the ANCOVAs give the precise differences, which reveal that the Yoga Nidra and Combined intervention groups show maximum and similar impact. The Bio Feedback intervention group shows minimum reduction in PTO Coping Style score. There is no improvement in the Control group.

Pre-Follow-up comparisons

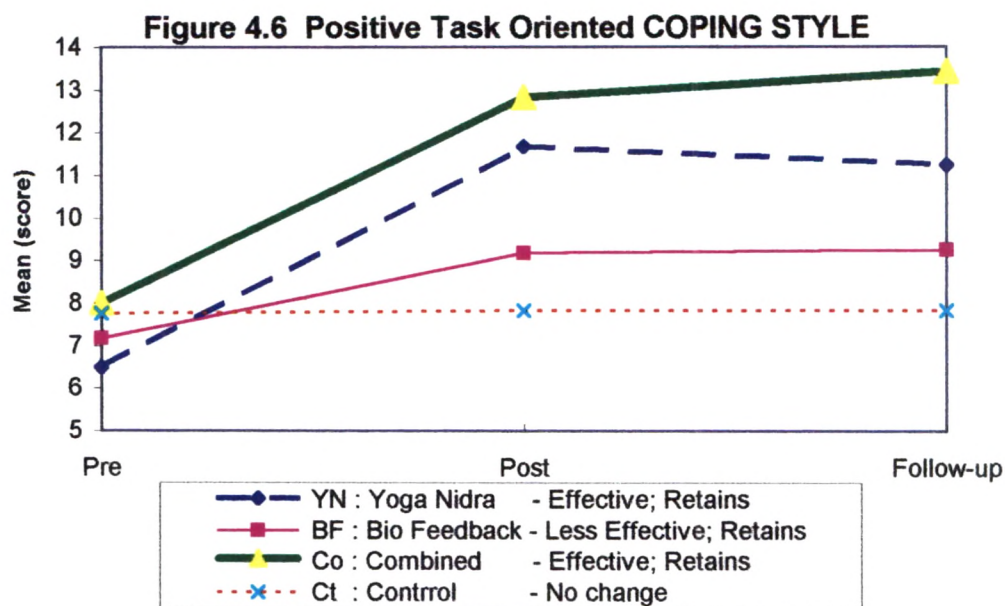
At this level, i.e., when the before intervention PTO Coping Style score are compared with the readings taken two months after the intervention, there is an average rise of about 5 points in Yoga Nidra group, 2 points in Bio Feedback group and 5 points in Combined group. The Control group shows no change. The **paired t-tests** indicate highly significant increment in the PTO Coping Style score in all the three intervention groups. The change in Control group is not significant. The ANCOVA confirms the differential impact of interventions at this level also. So the null hypothesis "*There will*

be no differential impact of the intervention techniques on Positive Task Oriented Coping Style” is rejected at Pre-Follow-up level. When precise differences are brought out by **post hoc** comparisons, Yoga Nidra and Combined groups show maximum and similar impact in PTO Coping Style. The increment in PTO Coping Style scores is lesser in the Bio Feedback group. There is no change in the Control group.

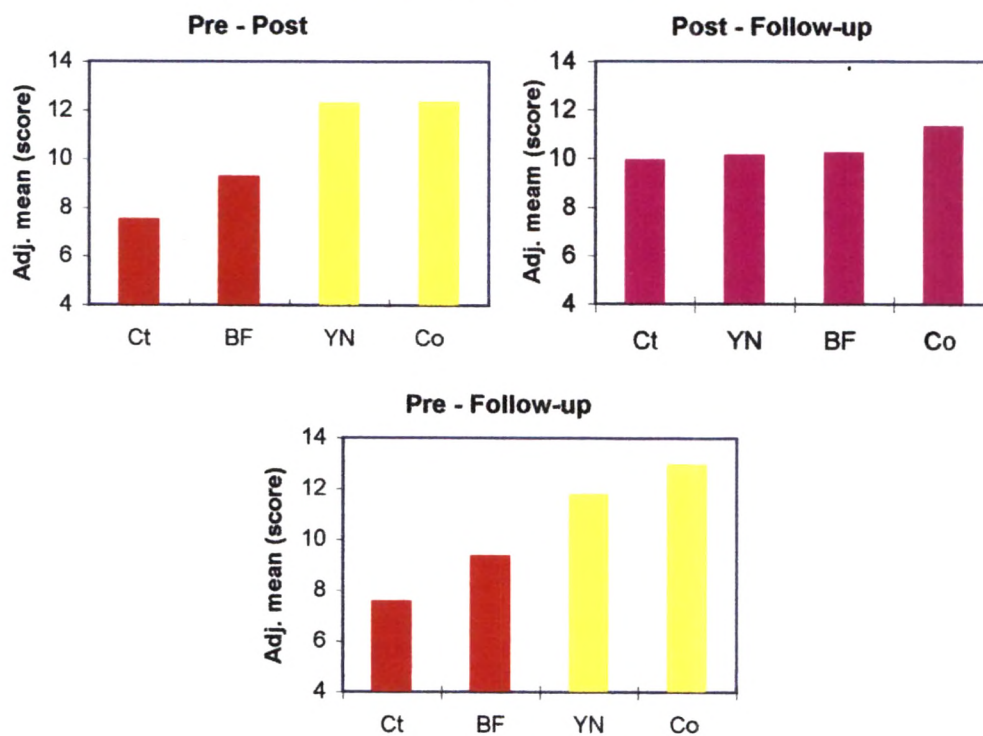
Post-Follow-up comparisons

The comparison between immediate impact of interventions and the impact of interventions after two months, shows not much change in PTO Coping Style in any of the groups. The **paired t-tests** show no significant change in PTO Coping Style in any of the groups. At Follow-up (two months after the interventions), it was observed that there is retention of impact in all the intervention groups. Control group also shows no significant change. The **ANCOVA** confirms no differential impact of interventions at this level. So the null hypothesis “*There will be no differential impact of the intervention techniques on Positive Task Oriented Coping Style*” is accepted at Post-Follow-up level.

Variations in PTO Coping Style scores from Pre to Post and Follow-up stages as well as variations in adjusted PTO Coping Style scores in three Post Hoc comparisons are depicted graphically in Figure 4.6.



Post Hoc Comparisons



Interventions forming a homogeneous subset at a level are indicated by the same colour

4.7 Analysis of NEGATIVE TASK ORIENTED COPING STYLE (NTO Coping Style)

TABLE 4.7A. Means and Standard Deviations of NTO Coping Style scores

| Intervention | N | Pre score | | Post score | | Follow-up score | |
|---------------|----|-----------|------|------------|------|-----------------|------|
| | | Mean | SD | Mean | SD | Mean | SD |
| Yoga Nidra | 12 | 12.08 | 5.23 | 6.83 | 3.24 | 7.92 | 2.35 |
| Bio Feedback | 12 | 11.42 | 1.93 | 10.50 | 1.78 | 10.25 | 1.71 |
| Combined | 12 | 14.08 | 2.81 | 7.75 | 2.01 | 6.67 | 1.61 |
| Control | 12 | 13.08 | 3.53 | 12.58 | 2.97 | 13.00 | 2.30 |
| Entire Sample | 48 | 12.67 | 3.62 | 9.42 | 3.39 | 9.46 | 3.13 |

TABLE 4.7B. MANOVA-RM on Pre, Post and Follow-up Measures of NTO Coping Style

| Pillai's Multivariate Tests | Pillai's Value | Hypoth df | Error df | Approx. F | Remarks |
|----------------------------------|----------------|-----------|----------|-----------|---------|
| NTO Coping Style | 0.61928 | 2 | 43 | 34.97 | *** |
| Intervention By NTO Coping Style | 0.68239 | 6 | 88 | 7.60 | *** |
| Univariate F-tests | SS | df | MS | F | Remarks |
| Within Cells | 300.33 | 88 | 3.41 | | |
| NTO Coping Style | 333.72 | 2 | 166.86 | 48.89 | *** |
| Intervention By NTO Coping Style | 246.61 | 6 | 41.10 | 12.04 | *** |

*** Significant at 0.001 level

The first F value in the Pillai's Multivariate Table is 34.97 it indicates that there is a highly significant (0.001 level) variation in the NTO Coping Style scores between the three measures, taking all interventions together. The corresponding Univariate F value is 48.89, which confirms the same. The second F value in the Pillai's Multivariate Table is 7.60. It indicates that there is a highly significant (0.001 level) variation in the NTO Coping Style between the interventions and the three measures. The corresponding Univariate F value is 12.04, which confirms the same.

TABLE 4.7C. Paired t-test Analysis for Repeated Measures on NTO Coping Style

| Comparison | Intervention | t-value | df | Remarks |
|-------------------|--------------|---------|----|---------|
| Pre Vs Post | Yoga Nidra | 3.88 | 11 | ** |
| | Bio Feedback | 1.45 | 11 | NS |
| | Combined | 8.54 | 11 | *** |
| | Control | 0.80 | 11 | NS |
| Pre Vs Follow-up | Yoga Nidra | 4.05 | 11 | ** |
| | Bio Feedback | 1.71 | 11 | NS |
| | Combined | 9.72 | 11 | *** |
| | Control | 0.17 | 11 | NS |
| Post Vs Follow-up | Yoga Nidra | 1.42 | 11 | NS |
| | Bio Feedback | 0.61 | 11 | NS |
| | Combined | 2.17 | 11 | NS |
| | Control | 0.77 | 11 | NS |

NS Not Significant, * Sig. at 0.05 level, ** Sig. at 0.01 level, *** Sig. at 0.001 level

The Paired t-values for the **Pre versus Post** comparisons are 3.88 (sig. at 0.01 level) for Yoga Nidra, 1.45 (not sig.) for Bio Feedback, 8.54 (sig. at 0.001 level) for the Combined group and 0.80 (not sig.) for the Control group. The Paired t-values for the **Pre versus Follow-up** comparisons are 4.05 (sig. at 0.01 level) for Yoga Nidra, 1.71 (not sig.) for Bio Feedback, 9.72 (sig. at 0.001 level) for the Combined group and 0.17 (not sig.) for the Control group. The Paired t-values for the **Post versus Follow-up** comparisons are 1.42 for Yoga Nidra, 0.61 for Bio Feedback, 2.17 for the Combined group and 0.77 for the Control group. None of these is significant.

TABLE 4.7D. ANCOVA on Post NTO Coping Style with Pre NTO Coping Style as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|----------------------------------|--------|----|-------|-------|---------|
| Covariate (Pre NTO Coping Style) | 70.84 | 1 | 70.84 | | |
| Main Effects (Intervention) | 262.04 | 3 | 87.35 | 18.16 | *** |
| Residual | 206.79 | 43 | 4.81 | | |
| Total | 539.67 | 47 | 11.48 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 2.40

| Mean Post NTO Coping Style score duly adjusted for Pre NTO Coping Style (score) | Intervention | YN | Co | BF | Ct |
|---|--------------|----|----|----|----|
| 7.06 | Yoga Nidra | | | | |
| 7.20 | Combined | | | | |
| 10.99 | Bio Feedback | * | * | | |
| 12.43 | Control | * | * | | |

* Significant at 0.05 level

Homogeneous Subsets

1. Yoga Nidra and Combined
2. Bio Feedback and Control

F value for the Post NTO Coping Style (with Pre NTO Coping Style as covariate) is 18.16. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the drop in the adjusted Post NTO Coping Style score in case of Yoga Nidra was similar to the drop in case of Combined intervention. The drop in case of Bio Feedback and the Control groups, is similar. Each of the Biofeedback and Control groups, differs significantly from the Yoga Nidra and the Combined interventions.

TABLE 4.7E. ANCOVA on Follow-up NTO Coping Style with Pre NTO Coping Style as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|----------------------------------|--------|----|--------|-------|---------|
| Covariate (Pre NTO Coping Style) | 56.49 | 1 | 56.49 | | |
| Main Effects (Intervention) | 306.97 | 3 | 102.32 | 45.61 | *** |
| Residual | 96.46 | 43 | 2.24 | | |
| Total | 459.92 | 47 | 9.79 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 1.64

| Mean Follow-up NTO Coping Style duly adjusted for Pre NTO Coping Style (score) | Intervention | Co | YN | BF | Ct |
|---|--------------|----|----|----|----|
| 6.12 | Combined | | | | |
| 8.14 | Yoga Nidra | * | | | |
| 10.73 | Bio Feedback | * | * | | |
| 12.84 | Control | * | * | * | |

* Significant at 0.05 level

Homogeneous Subsets None

F value for the Follow-up NTO Coping Style score (with Pre NTO Coping Style score as covariate) is 45.61. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the change in the adjusted Post NTO Coping Style score for each intervention differs significantly from each of the other interventions.

TABLE 4.7F. ANCOVA on Follow-up NTO Coping Style with Post NTO Coping Style as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|-----------------------------------|--------|----|--------|------|---------|
| Covariate (Post NTO Coping Style) | 294.75 | 1 | 294.75 | | |
| Main Effects (Intervention) | 62.77 | 3 | 20.92 | 8.79 | *** |
| Residual | 102.39 | 43 | 2.38 | | |
| Total | 459.92 | 47 | 9.79 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 1.69

| Mean Follow-up NTO Coping Style duly adjusted for Post NTO Coping Style (score) | Intervention | Co | YN | BF | Ct |
|---|--------------|----|----|----|----|
| 7.53 | Combined | | | | |
| 9.25 | Yoga Nidra | * | | | |
| 9.69 | Bio Feedback | * | | | |
| 11.37 | Control | * | * | | |

* Significant at 0.05 level

Homogeneous Subsets

1. Combined
2. Yoga Nidra and Bio Feedback
3. Bio Feedback and Control

F value for the Follow-up NTO Coping Style (with Pre NTO Coping Style as covariate) is 8.78. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the Bio Feedback can form a homogeneous subset either with Yoga Nidra or with the Control group. The Combined group differs significantly from the other three groups.

DISCUSSION on Negative Task Oriented (NTO) Coping Style

The MANOVA-RM results for NTO Coping Style are presented in the tables above. These results indicate highly significant *Intrasubject* (within the group) and *Intersubject* (among the groups) differences in the NTO Coping Style. Paired t-tests and ANCOVAs (followed with Tukey's post hoc comparisons) were carried out at three levels (Pre-Post, Post-Follow-up and Pre-Follow-up), to study the kind of differential impact of the intervention techniques.

Pre-Post comparisons

The readings of NTO Coping Style show an average fall of about 5 points in Yoga Nidra group, 1 point in Bio Feedback group, 6 points in Combined group. It remained almost the same in the Control group. The **paired t-tests** indicate significant reduction in the NTO Coping Style in Yoga Nidra intervention groups whereas the reduction in NTO Coping Style in Combined group is highly significant. The change in NTO Coping Style score in Bio Feedback and Control group are not significant. The **ANCOVA** confirms the differential impact of interventions at this level. So the null hypothesis "*There will be no differential impact of the intervention techniques on Negative Task Oriented Coping Style*" is rejected at Pre-Post level. The **Post Hoc** comparisons after the ANCOVAs give the precise differences, which reveal that the Yoga Nidra and the Combined intervention groups show maximum and similar impact. There is no improvement in the Bio Feedback and Control groups.

Pre-Follow-up comparisons

At this level, i.e., when the before intervention NTO Coping Style score is compared with the readings taken two months after the intervention, the average is about 4 points in Yoga Nidra group, 1 point in Bio Feedback group, 7 points in Combined group. There is almost no change in the Control group. The **paired t-tests** indicate significant reduction in the NTO Coping Style score in Yoga Nidra group and highly significant reduction in the Combined intervention group. The change in Bio Feedback and Control groups is not significant. The **ANCOVA** confirms the differential impact of

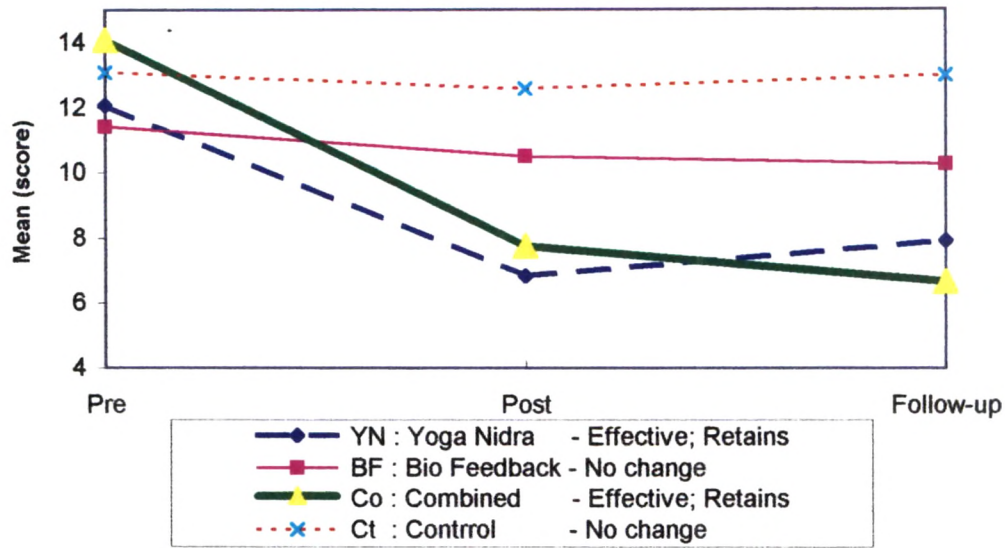
interventions at this level also. So the null hypothesis *“There will be no differential impact of the intervention techniques on Negative Task Oriented Coping Style”* is rejected at Pre-Follow-up level. When precise differences are brought out by **post hoc** comparisons, Combined group proves to be most effective in reducing NTO Coping Style score followed by Yoga Nidra group. Bio Feedback group shows least impact followed by Control group.

Post-Follow-up comparisons

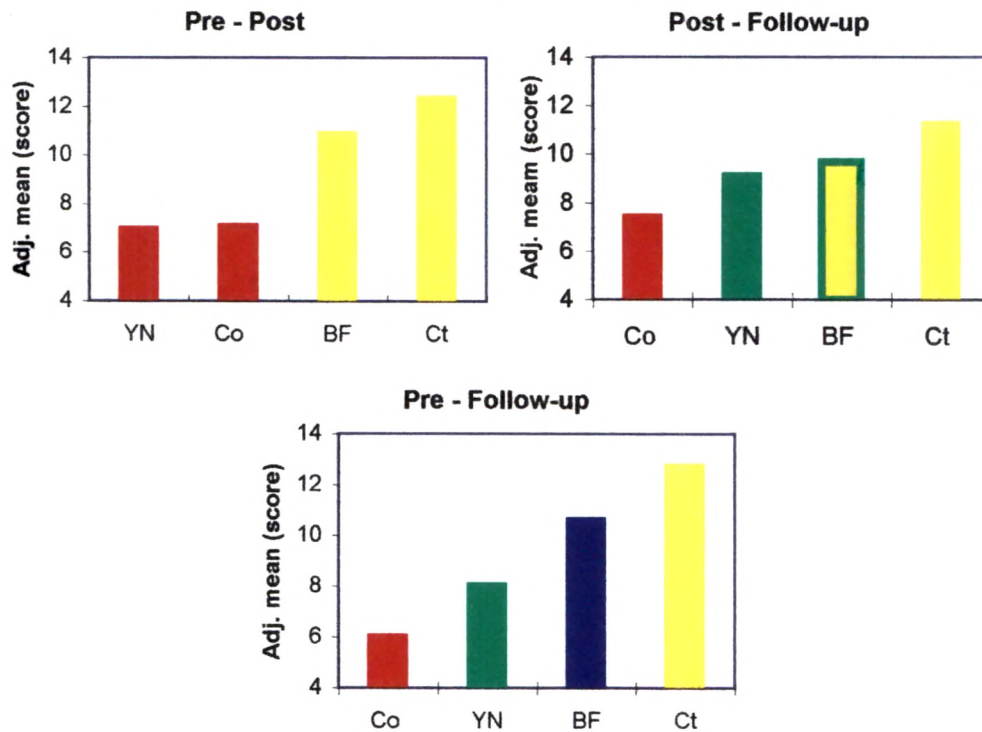
The comparison between immediate impact of interventions and the impact of interventions after two months, shows that the average NTO Coping Style score of the subjects in Yoga Nidra group increased by about 1 point. In the Combined group it decreased by 1 point. In Bio Feedback and Control groups it shows almost no change. The **paired t-tests** show no significant change in any of the groups. The **ANCOVA** confirms the differential impact of interventions at this level also. So the null hypothesis *“There will be no differential impact of the intervention techniques on Negative Task Oriented Coping Style”* is rejected at Post-Follow-up level. Through **Post Hoc** comparison, when we look at the precise differences, it is seen that the rate of regression is least in Combined group, followed by Yoga Nidra, Bio Feedback and Control groups.

Variations in NTO Coping Style scores from Pre to Post and Follow-up stages as well as variations in adjusted NTO Coping Style scores in three Post Hoc comparisons are depicted graphically in Figure 4.7.

Figure 4.7 Negative Task Oriented COPING STYLE



Post Hoc Comparisons



Interventions forming a homogeneous subset at a level are indicated by the same colour

4.8 Analysis of POSITIVE DEFENSE ORIENTED COPING STYLE (PDO Coping Style)

TABLE 4.8. Means and Standard Deviations of PDO Coping Style scores

| Intervention | N | Pre score | | Post score | | Follow-up score | |
|---------------|----|-----------|------|------------|------|-----------------|------|
| | | Mean | SD | Mean | SD | Mean | SD |
| Yoga Nidra | 12 | 8.08 | 4.94 | 12.50 | 4.93 | 13.17 | 3.43 |
| Bio Feedback | 12 | 7.25 | 2.18 | 9.08 | 2.50 | 9.83 | 1.95 |
| Combined | 12 | 6.08 | 2.28 | 12.50 | 2.28 | 13.08 | 1.98 |
| Control | 12 | 7.25 | 2.90 | 6.67 | 3.92 | 7.33 | 3.23 |
| Entire Sample | 48 | 7.17 | 3.24 | 10.19 | 4.26 | 10.85 | 3.61 |

TABLE 4.8B MANOVA-RM on Pre, Post and Follow-up Measures of PDO Coping Style

| Pillai's Multivariate Tests | Pillai's Value | Hypoth . df | Error df | Approx . F | Remarks |
|----------------------------------|----------------|-------------|----------|------------|---------|
| PDO Coping Style | 0.64537 | 2 | 43 | 39.13 | *** |
| Intervention By PDO Coping Style | 0.42794 | 6 | 88 | 3.99 | *** |
| Univariate F-tests | SS | df | MS | F | Remarks |
| Within Cells | 510.56 | 88 | 5.80 | | |
| PTO Coping Style | 370.68 | 2 | 185.34 | 31.95 | *** |
| Intervention By PDO Coping Style | 220.10 | 6 | 36.68 | 6.32 | *** |

*** Significant at 0.001 level

The first F value in the Pillai's Multivariate Table is 39.12 it indicates that there is a highly significant (0.001 level) variation in the PDO Coping Style between the three measures, taking all interventions together. The corresponding Univariate F value is 31.95, which confirms the same. The second F value in the Pillai's Multivariate Table is 3.99. It indicates that there is a highly significant (0.001 level) variation in the PDO Coping Style between the interventions and the three measures. The corresponding Univariate F value is 6.32, which confirms the same.

TABLE 4.8C. Paired t-test Analysis for Repeated Measures on PDO Coping Style

| Comparison | Intervention | t-value | df | Remarks |
|-------------------|--------------|---------|----|---------|
| Pre Vs Post | Yoga Nidra | 2.02 | 11 | NS |
| | Bio Feedback | 2.22 | 11 | * |
| | Combined | 11.00 | 11 | *** |
| | Control | 0.75 | 11 | NS |
| Pre Vs Follow-up | Yoga Nidra | 3.67 | 11 | ** |
| | Bio Feedback | 3.11 | 11 | ** |
| | Combined | 9.23 | 11 | *** |
| | Control | 0.15 | 11 | NS |
| Post Vs Follow-up | Yoga Nidra | 0.68 | 11 | NS |
| | Bio Feedback | 2.02 | 11 | NS |
| | Combined | 1.05 | 11 | NS |
| | Control | 1.30 | 11 | NS |

NS Not Significant, * Sig. at 0.05 level, ** Sig. at 0.01 level, *** Sig. at 0.001 level

The Paired t-values for the **Pre versus Post** comparisons are 2.02 (not sig.) for Yoga Nidra, 2.22 (sig. at 0.05 level) for Bio Feedback, 11.00 (sig. at 0.001 level) for the Combined group and 0.75 (not sig.) for the Control group. The Paired t-values for the **Pre versus Follow-up** comparisons are 3.67 (sig. at 0.01 level) for Yoga Nidra, 3.11 (sig. at 0.01 level) for Bio Feedback, 9.23 (sig. at 0.001 level) for the Combined group and 0.15 (not sig.) for the Control group. The Paired t-values for the **Post versus Follow-up** comparisons are 0.68 for Yoga Nidra, 2.02 for Bio Feedback, 1.05 for the Combined group and 1.30 for the Control group. None of these is significant.

TABLE 4.8D. ANCOVA on Post PDO Coping Style with Pre PDO Coping Style as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|----------------------------------|--------|----|-------|------|---------|
| Covariate (Pre PDO Coping Style) | 13.76 | 1 | 13.76 | | |
| Main Effects (Intervention) | 295.87 | 3 | 98.62 | 7.80 | *** |
| Residual | 543.69 | 43 | 12.64 | | |
| Total | 853.31 | 47 | 18.16 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 3.89

| Mean Post PDO Coping Style duly adjusted for Pre PDO Coping Style (score) | Intervention | Ct | BF | YN | Co |
|--|--------------|----|----|----|----|
| 6.65 | Control | | | | |
| 9.07 | Bio Feedback | | | | |
| 12.32 | Yoga Nidra | * | | | |
| 12.71 | Combined | * | | | |

* Significant at 0.05 level

Homogeneous Subsets

1. Control and Bio Feedback
2. Bio Feedback, Yoga Nidra and Combined

F value for the Post PDO Coping Style (with Pre PDO Coping Style as covariate) is 7.80. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the change in the adjusted Post PDO Coping Style score in case of Control is similar to the change in case of Bio Feedback intervention. Bio Feedback forms a homogeneous subset either with the Control group or the Yoga Nidra & Combined groups.

TABLE 4.8E. ANCOVA on Follow-up PDO Coping Style with Pre PDO Coping Style as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|----------------------------------|--------|----|-------|-------|---------|
| Covariate (Pre PDO Coping Style) | 51.86 | 1 | 51.86 | | |
| Main Effects (Intervention) | 293.39 | 3 | 97.80 | 15.65 | *** |
| Residual | 268.73 | 43 | 6.25 | | |
| Total | 613.98 | 47 | 13.06 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 2.74

| Mean Follow-up PDO Coping Style duly adjusted for Pre PDO Coping Style (score) | Intervention | Ct | BF | YN | Co |
|---|--------------|----|----|----|----|
| 7.30 | Control | | | | |
| 9.80 | Bio Feedback | | | | |
| 12.83 | Yoga Nidra | * | * | | |
| 13.47 | Combined | * | * | | |

* Significant at 0.05 level

Homogeneous Subsets

1. Control and Bio Feedback
2. Yoga Nidra and Combined

F value for the Follow-up PDO Coping Style (with Pre PDO Coping Style as covariate) is 15.65. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the drop in the adjusted Follow-up PDO Coping Style score in case of Control was similar to the drop in case of Bio Feedback intervention. The drop in case of Yoga Nidra and the Combined interventions, is similar. Each of the Yoga Nidra and Combined interventions, differs significantly from the Control and Bio Feedback interventions.

TABLE 4.8F. ANCOVA on Follow-up PDO Coping Style with Post PDO Coping Style as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|-----------------------------------|--------|----|--------|------|---------|
| Covariate (Post PDO Coping Style) | 455.31 | 1 | 455.31 | | |
| Main Effects (Intervention) | 29.59 | 3 | 9.86 | 3.29 | * |
| Residual | 129.08 | 43 | 3.00 | | |
| Total | 613.98 | 47 | 13.06 | | |

* Significant at 0.05 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 1.90

| Mean Follow-up PDO Coping Style duly adjusted for Post PDO Coping Style (score) | Intervention | Ct | BF | Co | YN |
|--|--------------|----|----|----|----|
| 9.43 | Control | | | | |
| 10.49 | Bio Feedback | | | | |
| 11.70 | Combined | * | | | |
| 11.78 | Yoga Nidra | * | | | |

* Significant at 0.05 level

Homogeneous Subsets

1. Control and Bio Feedback
2. Bio Feedback, Combined and Yoga Nidra

F value for the Follow-up PDO Coping Style (with Pre PDO Coping Style as covariate) is 3.29. It indicates significant differential effect of the interventions at 0.05 level. Post Hoc comparisons show that the change in the adjusted Follow-up PDO Coping Style score in case of Control is similar to the change in case of Bio Feedback intervention. Bio Feedback forms a homogeneous subset either with the Control group or the Yoga Nidra & Combined groups.

DISCUSSION on Positive Defense Oriented Coping Style

The MANOVA-RM results for PDO Coping Style are presented in the tables above. These results indicate highly significant *Intrasubject* (within the group) and *Intersubject* (among the groups) differences in the PDO Coping Style score. Paired t-tests and ANCOVAs (followed with Tukey's post hoc comparisons) were carried out at three levels (Pre-Post, Post-Follow-up and Pre-Follow-up), to study the kind of differential impact of the intervention techniques.

Pre-Post comparisons

The readings of PDO Coping Style score show an average rise of about 4 points in Yoga Nidra group, 2 points in Bio Feedback group, 6 points in Combined group. There is a fall of about 1 point in the Control group. The **paired t-tests** indicate highly significant increment in the PDO Coping Style score in Combined intervention group whereas increment in PDO Coping Style score in the Bio Feedback group shows border-line significance. The change in Yoga Nidra and Control groups is not significant. The ANCOVA confirms the differential impact of interventions at this level. So the null hypothesis "*There will be no differential impact of the intervention techniques on Positive Defense Oriented Coping Style*" is rejected at Pre-Post level. The **Post Hoc** comparisons after the ANCOVAs give the precise differences, which reveal that the Combined intervention group show maximum impact on PDO Coping Style followed by Yoga Nidra and Bio Feedback intervention groups. There is no improvement in the Control group.

Pre-Follow-up comparisons

At this level, i.e., when the before intervention PDO Coping Style scores are compared with the readings taken two months after the intervention, the average rise is about 5 points in Yoga Nidra group, 3 points in Bio Feedback group, 7 points in Combined group. There is almost no change in the Control group. The **paired t-tests** indicate highly significant increment in the PDO Coping Style score in Combined intervention group. The Bio Feedback and Yoga Nidra groups also show significant rise

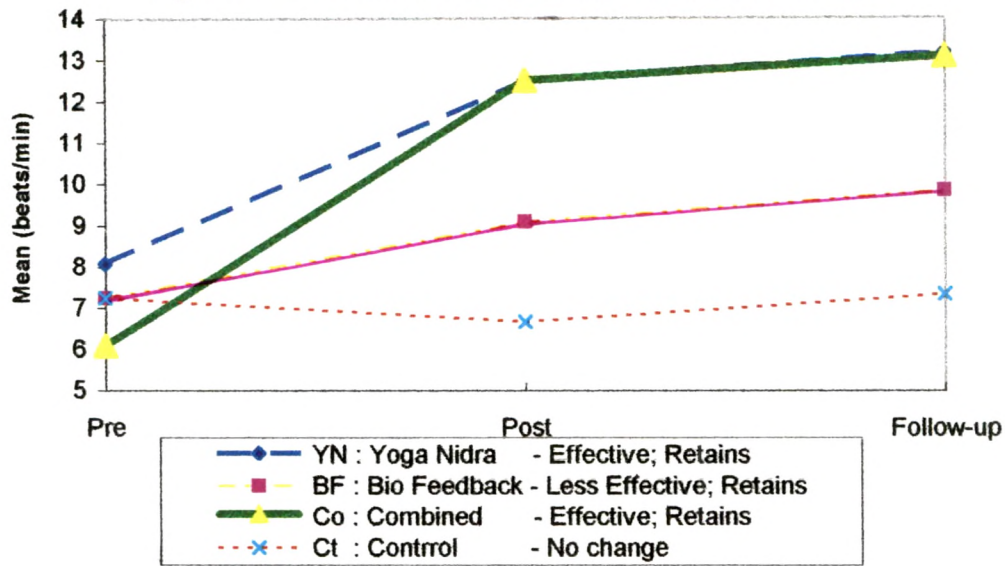
in PDO Coping Style scores. The change in Control group is not significant. The ANCOVA confirms the differential impact of interventions at this level also. So the null hypothesis "*There will be no differential impact of the intervention techniques on Positive Defense Oriented Coping Style*" is rejected at Pre-Follow-up level. When precise differences are brought out by **post hoc** comparisons, Combined and Yoga Nidra intervention groups show maximum and similar impact in PDO Coping Style. The increment in PDO Coping Style score is lesser in the Bio Feedback group. Control group shows no impact.

Post-Follow-up comparisons

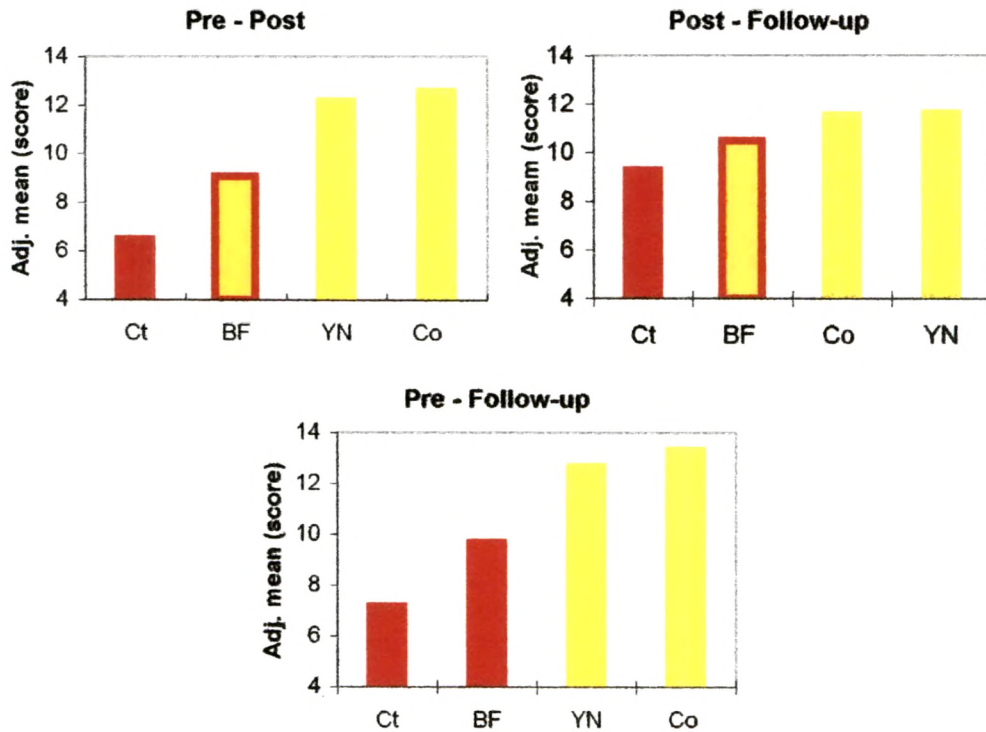
The comparison between immediate impact of interventions and the impact of interventions after two months, show an average increase of about 1 point in PDO Coping Style score in each of the groups. The *paired t-tests* show no significant change in PDO Coping Style score in any of the groups. At Follow-up (two months after the interventions), it was observed that the impact of all the three intervention was retained for the PDO Coping Style whereas there was no significant change in Control group. The ANCOVA confirms no differential impact of interventions at this level.. So the null hypothesis "*There will be no differential impact of the intervention techniques on Positive Defense Oriented Coping Style*" is rejected at Post-Follow-up level.

Variations in PDO Coping Style scores from Pre to Post and Follow-up stages as well as variations in adjusted PDO Coping Style scores in three Post Hoc comparisons are depicted graphically in Figure 4.8.

Figure 4.8 Positive Defence Oriented COPING STYLE



Post Hoc Comparisons



Interventions forming a homogeneous subset at a level are indicated by the same colour

4.9 Analysis of NEGATIVE DEFENSE ORIENTED COPING STYLE (NDO Coping Style)

TABLE 4.9A. Means and Standard Deviations of NDO Coping Style scores

| Intervention | N | Pre score | | Post score | | Follow-up score | |
|---------------|----|-----------|------|------------|------|-----------------|------|
| | | Mean | SD | Mean | SD | Mean | SD |
| Yoga Nidra | 12 | 15.08 | 3.85 | 7.33 | 2.77 | 7.50 | 2.47 |
| Bio Feedback | 12 | 14.25 | 2.86 | 11.25 | 2.26 | 10.50 | 2.91 |
| Combined | 12 | 12.67 | 2.31 | 7.08 | 2.78 | 6.83 | 1.47 |
| Control | 12 | 11.92 | 4.40 | 13.08 | 4.62 | 11.83 | 3.33 |
| Entire Sample | 48 | 13.48 | 3.57 | 9.69 | 4.06 | 9.17 | 3.30 |

TABLE 4.9B. MANOVA-RM on Pre, Post and Follow-up Measures of NDO Coping Style

| Pillai's Multivariate Tests | Pillai's Value | Hypoth . df | Error df | Approx . F | Remarks |
|----------------------------------|----------------|-------------|----------|------------|---------|
| NDO Coping Style | 0.72698 | 2 | 43 | 57.25 | *** |
| Intervention By NDO Coping Style | 0.56891 | 6 | 88 | 5.83 | *** |
| Univariate F-tests | SS | df | MS | F | Remarks |
| Within Cells | 393.00 | 88 | 4.47 | | |
| NDO Coping Style | 531.93 | 2 | 265.97 | 59.55 | *** |
| Intervention By NDO Coping Style | 305.74 | 6 | 50.96 | 11.41 | *** |

*** Significant at 0.001 level

The first F value in the Pillai's Multivariate Table is 57.25 it indicates that there is a highly significant (0.001 level) variation in the NDO Coping Style between the three measures, taking all interventions together. The corresponding Univariate F value is 59.55, which confirms the same. The second F value in the Pillai's Multivariate Table is 5.83. It indicates that there is a highly significant (0.001 level) variation in the NDO Coping Style between the interventions and the three measures. The corresponding Univariate F value is 11.41, which confirms the same.

TABLE 4.9C. Paired t-test Analysis for Repeated Measures on NDO Coping Style

| Comparison | Intervention | t-value | df | Remarks |
|-------------------|--------------|---------|----|---------|
| Pre Vs Post | Yoga Nidra | 6.39 | 11 | *** |
| | Bio Feedback | 3.17 | 11 | ** |
| | Combined | 9.57 | 11 | *** |
| | Control | 1.08 | 11 | NS |
| Pre Vs Follow-up | Yoga Nidra | 8.76 | 11 | *** |
| | Bio Feedback | 4.22 | 11 | *** |
| | Combined | 8.40 | 11 | *** |
| | Control | 0.11 | 11 | NS |
| Post Vs Follow-up | Yoga Nidra | 0.20 | 11 | NS |
| | Bio Feedback | 1.39 | 11 | NS |
| | Combined | 0.32 | 11 | NS |
| | Control | 1.31 | 11 | NS |

NS Not Significant, * Sig. at 0.05 level, ** Sig. at 0.01 level, *** Sig. at 0.001 level

The Paired t-values for the **Pre versus Post** comparisons are 6.39 (sig. at 0.001 level) for Yoga Nidra, 3.17 (sig. at 0.01 level) for Bio Feedback, 9.57 (sig. at 0.001 level) for the Combined group and 1.08 (not sig.) for the Control group. The Paired t-values for the **Pre versus Follow-up** comparisons are 8.76 (sig. at 0.001 level) for Yoga Nidra, 4.22 (sig. at 0.001 level) for Bio Feedback, 8.40 (sig. at 0.001 level) for the Combined group and 0.11 (not sig.) for the Control group. The Paired t-values for the **Post versus Follow-up** comparisons are 0.20 for Yoga Nidra, 1.39 for Bio Feedback, 0.32 for the Combined group and 1.31 for the Control group. None of these is significant.

TABLE 4.9D. ANCOVA on Post NDO Coping Style with Pre NDO Coping Style as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|----------------------------------|--------|----|--------|-------|---------|
| Covariate (Pre NDO Coping Style) | 47.15 | 1 | 47.15 | 15.24 | *** |
| Main Effects (Intervention) | 375.76 | 3 | 125.25 | | |
| Residual | 353.41 | 43 | 8.22 | | |
| Total | 776.31 | 47 | 16.52 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 3.14

| Mean Post NDO Coping Style duly adjusted for Pre NDO Coping Style (score) | Intervention | YN | Co | BF | Ct |
|--|--------------|----|----|----|----|
| 6.61 | Yoga Nidra | | | | |
| 7.45 | Combined | | | | |
| 10.90 | Bio Feedback | * | * | | |
| 13.79 | Control | * | * | | |

* Significant at 0.05 level

Homogeneous Subsets

1. Yoga Nidra and Combined
2. Bio Feedback and Control

F value for the Post NDO Coping Style (with Pre NDO Coping Style as covariate) is 15.24. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the drop in the adjusted Post NDO Coping Style score in case of Yoga Nidra was similar to the drop in case of Combined intervention. The drop in case of Bio Feedback and the Control groups, is similar. Each of the Biofeedback and Control groups, differs significantly from the Yoga Nidra and the Combined interventions.

TABLE 4.9E. ANCOVA on Follow-up NDO Coping Style with Pre NDO Coping Style as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|----------------------------------|--------|----|-------|-------|---------|
| Covariate (Pre NDO Coping Style) | 65.45 | 1 | 65.45 | 19.11 | *** |
| Main Effects (Intervention) | 254.43 | 3 | 84.81 | | |
| Residual | 190.79 | 43 | 4.44 | | |
| Total | 510.67 | 47 | 10.87 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 2.31

| Mean Follow-up NDO Coping Style duly adjusted for Pre NDO Coping Style (score) | Intervention | YN | Co | BF | Ct |
|--|--------------|----|----|----|----|
| 6.75 | Yoga Nidra | | | | |
| 7.22 | Combined | | | | |
| 10.14 | Bio Feedback | * | * | | |
| 12.57 | Control | * | * | * | |

* Significant at 0.05 level

Homogeneous Subsets

1. Yoga Nidra and Combined
2. Bio Feedback
3. Control

F value for the Follow-up NDO Coping Style (with Pre NDO Coping Style as covariate) is 19.11. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the change in the adjusted Follow-up NDO Coping Style score in case of Yoga Nidra is similar to the drop in case of Combined intervention whereas the change in case of Bio Feedback and the Control groups differs significantly with the other groups.

TABLE 4.9F. ANCOVA on Follow-up NDO Coping Style with Post NDO Coping Style as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|-----------------------------------|--------|----|--------|------|---------|
| Covariate (Post NDO Coping Style) | 287.59 | 1 | 287.59 | | |
| Main Effects (Intervention) | 21.68 | 3 | 7.23 | 1.54 | NS |
| Residual | 201.40 | 43 | 4.68 | | |
| Total | 510.67 | 47 | 10.87 | | |

NS Not Significant

| Mean Follow-up NDO Coping Style duly adjusted for Post NDO Coping Style (score) | Intervention |
|---|--------------|
| 8.07 | Combined |
| 8.62 | Yoga Nidra |
| 9.76 | Bio Feedback |
| 10.22 | Control |

* Significant at 0.05 level

Homogeneous Subset

All interventions

F value for the Follow-up NDO Coping Style (with Post NDO Coping Style as covariate) is 1.54. It indicates that there is no significant differential effect of the interventions. Yoga Nidra, Bio Feedback, Combined and the Control group - all form a single homogeneous set.

DISCUSSION on Negative Defense Oriented Coping Style

The MANOVA-RM results for NDO Coping Style are presented in the tables above. These results indicate highly significant *Intrasubject* (within the group) and *Intersubject* (among the groups) differences in the NDO Coping Style. Paired t-tests and ANCOVAs (followed with Tukey's post hoc comparisons) were carried out at three levels (Pre-Post, Post-Follow-up and Pre-Follow-up), to study the kind of differential impact of the intervention techniques.

Pre-Post comparisons

The readings of NDO Coping Style scores show an average fall of about 8 points in Yoga Nidra group, 3 points in Bio Feedback group and 6 points in Combined group. There is an increase of about 1 point in the Control group. The **paired t-tests** indicate highly significant reduction in the NDO Coping Style scores in Yoga Nidra and Combined intervention groups. The reduction in NDO Coping Style score in Bio Feedback is significant at lesser degree. The Control group shows no change. The **ANCOVA** confirms the differential impact of interventions at this level. So the null hypothesis "*There will be no differential impact of the intervention techniques on Negative Defense Oriented Coping Style*" is rejected at Pre-Post level. The **Post Hoc** comparisons after the ANCOVAs give the precise differences, which reveal that the Yoga Nidra and Combined intervention groups show maximum and similar impact. The Bio Feedback intervention group shows minimum reduction in NDO Coping Style score. There is no improvement in the Control group.

Pre-Follow-up comparisons

At this level, i.e., when the before intervention NDO Coping Style scores are compared with the readings taken two months after the intervention, the average fall was about 8 points in Yoga Nidra group, 4 points in Bio Feedback group, 6 points in Combined group. The NDO Coping Style remained almost the same in the Control group. The **paired t-tests** indicate highly significant reduction in the NDO Coping Style scores in all the three intervention groups. The Control group shows no change. The

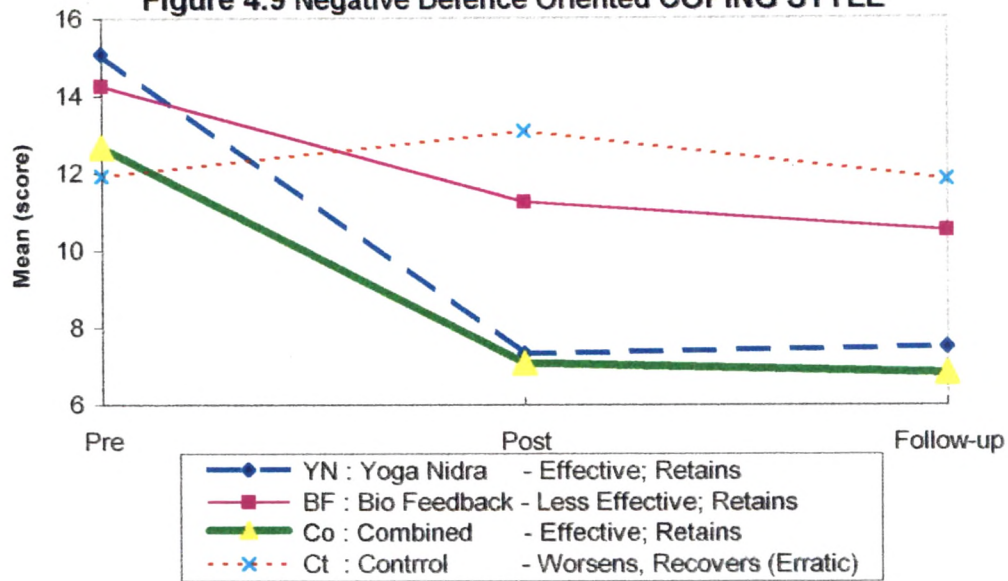
ANCOVA confirms the differential impact of interventions at this level also. So the null hypothesis "*There will be no differential impact of the intervention techniques on Negative Defense Oriented Coping Style*" is rejected at Pre-Follow-up level. When precise differences are brought out by post hoc comparisons, Yoga Nidra and Combined intervention groups show maximum and similar impact in NDO Coping Style. The reduction in NDO Coping Style score is lesser in the Bio Feedback group and nil in the Control group.

Post-Follow-up comparisons

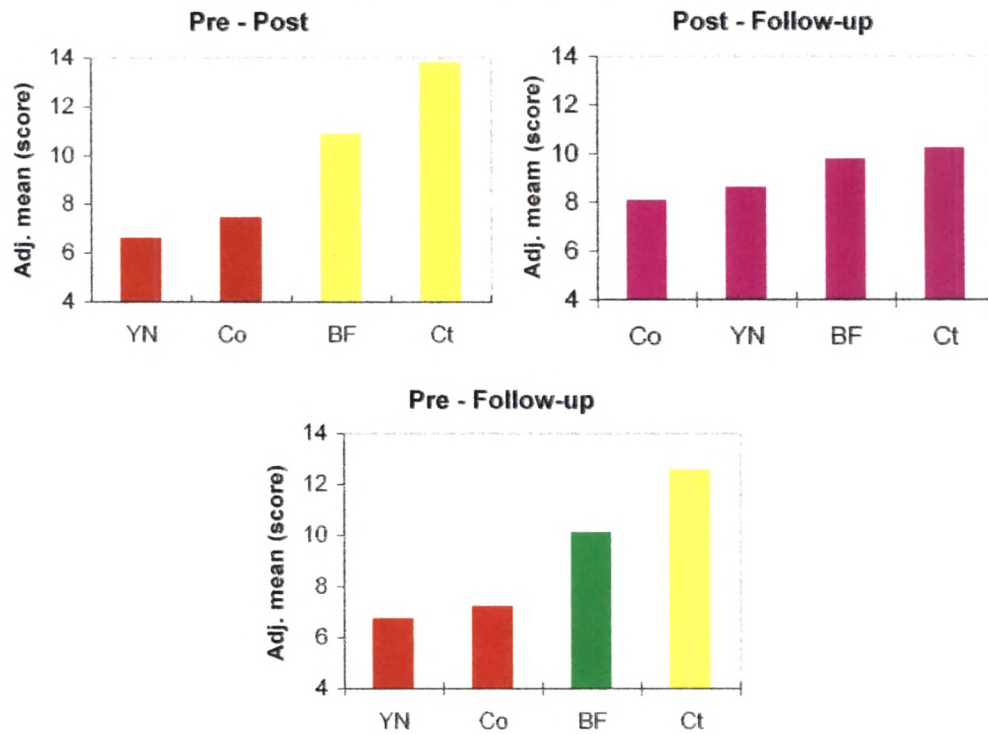
The comparison between immediate impact of interventions and the impact of interventions after two months, shows almost no change in the NDO Coping Style of the subjects in all the three intervention groups. In the Control groups there is an average increase of 1 point. The paired t-tests show no significant change in NDO Coping Style in any of the groups. At Follow-up (two months after the interventions), it was observed that the impact of all the three intervention groups was retained for the NDO Coping Style whereas the control group shows no change. The ANCOVA confirms no differential impact of interventions at this level. So the null hypothesis "*There will be no differential impact of the intervention techniques on Negative Defense Oriented Coping Style*" is accepted at Post-Follow-up level.

Variations in NDO Coping Style scores from Pre to Post and Follow-up stages as well as variations in adjusted NDO Coping Style scores in three Post Hoc comparisons are depicted graphically in Figure 4.9.

Figure 4.9 Negative Defence Oriented COPING STYLE



Post Hoc Comparisons



**Interventions forming a homogeneous subset
at a level are indicated by the same colour**

4.10 Analysis of ADJUSTMENT

TABLE 4.10A. Means and Standard Deviations of Adjustment Scores

| Intervention | N | Pre | | Post | | Follow-up | |
|---------------|----|--------|-------|-------|-------|-----------|-------|
| | | Mean | SD | Mean | SD | Mean | SD |
| Yoga Nidra | 12 | 103.67 | 13.10 | 56.33 | 14.51 | 64.42 | 14.01 |
| Bio Feedback | 12 | 99.50 | 13.47 | 88.58 | 15.84 | 89.67 | 13.41 |
| Combined | 12 | 101.17 | 12.05 | 65.58 | 15.70 | 65.92 | 15.27 |
| Control | 12 | 90.92 | 17.52 | 96.92 | 16.86 | 100.58 | 13.26 |
| Entire Sample | 48 | 98.81 | 14.56 | 76.85 | 22.59 | 80.15 | 20.70 |

TABLE 4.10B. MANOVA-RM on Pre, Post and Follow-up Measures of Adjustment

| Pillai's Multivariate Tests | Pillai's Value | Hypoth. df | Error df | Approx. F | Remarks |
|-----------------------------|----------------|------------|----------|-----------|---------|
| Adjustment | 0.88684 | 2 | 43 | 168.49 | *** |
| Intervention By Adjustment | 1.02127 | 6 | 88 | 15.30 | *** |
| Univariate F-tests | SS | df | MS | F | Remarks |
| Within Cells | 3170.17 | 88 | 36.02 | | |
| Adjustment | 13463.17 | 2 | 6731.58 | 186.86 | *** |
| Intervention By Adjustment | 13397.33 | 6 | 2232.89 | 61.98 | *** |

*** Significant at 0.001 level

The first F value in the Pillai's Multivariate Table is 168.49. It indicates that there is a highly significant (0.001 level) variation in the Adjustment between the three measures, taking all interventions together. The corresponding Univariate F value is 186.86, which confirms the same. The second F value in the Pillai's Multivariate Table is 15.30. It indicates that there is a highly significant (0.001 level) variation in the Adjustment between the interventions and the three measures. The corresponding Univariate F value is 61.98, which confirms the same.

TABLE 4.10C. Paired t-test Analysis for Repeated Measures on Adjustment score

| Comparison | Intervention | t-value | df | Remarks |
|-------------------|--------------|---------|----|---------|
| Pre Vs Post | Yoga Nidra | 14.52 | 11 | *** |
| | Bio Feedback | 7.02 | 11 | *** |
| | Combined | 12.14 | 11 | *** |
| | Control | 6.96 | 11 | *** |
| Pre Vs Follow-up | Yoga Nidra | 11.27 | 11 | *** |
| | Bio Feedback | 4.29 | 11 | *** |
| | Combined | 11.24 | 11 | *** |
| | Control | 4.30 | 11 | *** |
| Post Vs Follow-up | Yoga Nidra | 2.61 | 11 | * |
| | Bio Feedback | 0.60 | 11 | NS |
| | Combined | 0.42 | 11 | NS |
| | Control | 1.96 | 11 | NS |

NS Not Significant, * Sig. at 0.05 level, ** Sig. at 0.01 level, *** Sig. at 0.001 level

The Paired t-values for the **Pre versus Post** comparisons are 14.52 for Yoga Nidra, 7.02 for Bio Feedback, 12.14 for the Combined group and 6.96 for the Control group. All of these are sig. at 0.001 level. The Paired t-values for the **Pre versus Follow-up** comparisons are 11.27 for Yoga Nidra, 4.29 for Bio Feedback, 11.24 for the Combined group and 4.30 for the Control group. Once again all of these are sig. at 0.001 level. The Paired t-values for the **Post versus Follow-up** comparisons are 2.61 (sig. at 0.05 level) for Yoga Nidra, 0.60 (not sig.) for Bio Feedback, 0.42 (not sig.) for the Combined group and 1.06 (not sig.) for the Control group.

TABLE 4.10D. ANCOVA on Post Adjustment with Pre Adjustment as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|-----------------------------|----------|----|---------|-------|---------|
| Covariate (Pre Adjustment) | 2601.60 | 1 | 2601.60 | | |
| Main Effects (Intervention) | 18440.42 | 3 | 6146.81 | 90.15 | *** |
| Residual | 2931.97 | 43 | 68.19 | | |
| Total | 23973.98 | 47 | 510.09 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 9.03

| Mean Post Adjustment duly adjusted for Pre Adjustment (score) | Intervention | YN | Co | BF | Ct |
|--|--------------|----|----|----|----|
| 51.72 | Yoga Nidra | | | | |
| 63.34 | Combined | * | | | |
| 87.93 | Bio Feedback | * | * | | |
| 104.41 | Control | * | * | * | |

* Significant at 0.05 level

Homogeneous Subsets None

F value for the Post Adjustment (with Pre Adjustment as covariate) is 90.15. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the change in the adjusted Post Adjustment score for each intervention differs significantly from each of the other interventions.

TABLE 4.10E. ANCOVA on Follow-up Adjustment with Pre Adjustment as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|-----------------------------|----------|----|---------|-------|---------|
| Covariate (Pre Adjustment) | 1187.27 | 1 | 1187.27 | | |
| Main Effects (Intervention) | 15252.48 | 3 | 5084.16 | 59.18 | *** |
| Residual | 3694.23 | 43 | 85.91 | | |
| Total | 20133.98 | 47 | 428.38 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 10.14

| Mean Follow-up Adjustment duly adjusted for Pre Adjustment (score) | Intervention | YN | Co | BF | Ct |
|---|--------------|----|----|----|----|
| 60.79 | Yoga Nidra | | | | |
| 64.16 | Combined | | | | |
| 89.16 | Bio Feedback | * | * | | |
| 106.49 | Control | * | * | * | |

* Significant at 0.05 level

Homogeneous Subsets

1. Yoga Nidra and Combined
2. Bio Feedback
3. Control

F value for the Follow-up Adjustment (with Pre Adjustment as covariate) is 59.18. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the drop in the adjusted Follow-up Adjustment score in case of Yoga Nidra is similar to the drop in case of Combined intervention whereas the drop in case of Bio Feedback and the Control groups differs significantly with the other groups.

TABLE 4.10F. ANCOVA on Follow-up Adjustment with Post Adjustment as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|-----------------------------|----------|----|----------|------|---------|
| Covariate (Post Adjustment) | 17849.00 | 1 | 17849.00 | | |
| Main Effects (Intervention) | 469.23 | 3 | 156.41 | 3.70 | * |
| Residual | 1815.75 | 43 | 42.23 | | |
| Total | 20133.98 | 47 | 428.38 | | |

* Significant at 0.05 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 7.11

| Mean Follow-up Adjustment duly adjusted for Post Adjustment (score) | Intervention | Co | BF | YN | Ct |
|--|--------------|----|----|----|----|
| 74.83 | Combined | | | | |
| 80.40 | Bio Feedback | | | | |
| 80.64 | Yoga Nidra | | | | |
| 84.73 | Control | * | | | |

* Significant at 0.05 level

Homogeneous Subset

1. Combined, Bio Feedback and Yoga Nidra
2. Bio Feedback, Yoga Nidra and Control

F value for the Follow-up Adjustment (with Post Adjustment as covariate) is 3.70. It indicates a significant differential effect of the interventions at 0.05 level. Post Hoc comparisons show that only the Control group differs significantly from the Combined intervention. Bio Feedback and Yoga Nidra together form a homogeneous subset with either the Combined intervention or with the Control group.

DISCUSSION on ADJUSTMENT

The MANOVA-RM results for Adjustment are presented in the tables above. These results indicate highly significant *Intrasubject* (within the group) and *Intersubject* (among the groups) differences in the Adjustment. Paired t-tests and ANCOVAs (followed with Tukey's post hoc comparisons) were carried out at three levels (Pre-Post, Post-Follow-up and Pre-Follow-up), to study the kind of differential impact of the intervention techniques.

Pre-Post comparisons

The readings of Adjustment scores show a decrease of about 47 points in Yoga Nidra group, 10 points in Bio Feedback group, 35 points in Combined group - indicating varying degrees of improvement. The adjustment score increased by about 6 points in the Control group indicating deterioration. The **paired t-tests** indicate highly significant reduction in the Adjustment scores indicating improvement in all the three intervention groups whereas the Control group shows significant increase in Adjustment scores indicating deterioration. The ANCOVA confirms the differential impact of interventions at this level. So the null hypothesis "*There will be no differential impact of the intervention techniques on Adjustment*" is rejected at Pre-Post level. The **Post Hoc** comparisons after the ANCOVAs give the precise differences, which reveal that the Yoga Nidra group shows maximum improvement in Adjustment followed by Combined and Bio Feedback intervention groups. There is mild deterioration in the Control group.

Pre-Follow-up comparisons

At this level, i.e., when the before intervention Adjustment scores are compared with the assessment carried out two months after the intervention, there is an average fall of about 39 points in Yoga Nidra group, 10 points in Bio Feedback group, 35 points in Combined group. The Adjustment scores increased by about 4 points in the Control group. **The paired t-tests** indicate highly significant reduction in the Adjustment scores in all the three intervention groups. The Control group shows highly significant increment in the Adjustment scores, which indicates that the improvement is significant in the intervention groups whereas the deterioration is significant in Control group. The ANCOVA confirms the differential impact of interventions at this level also. So the null

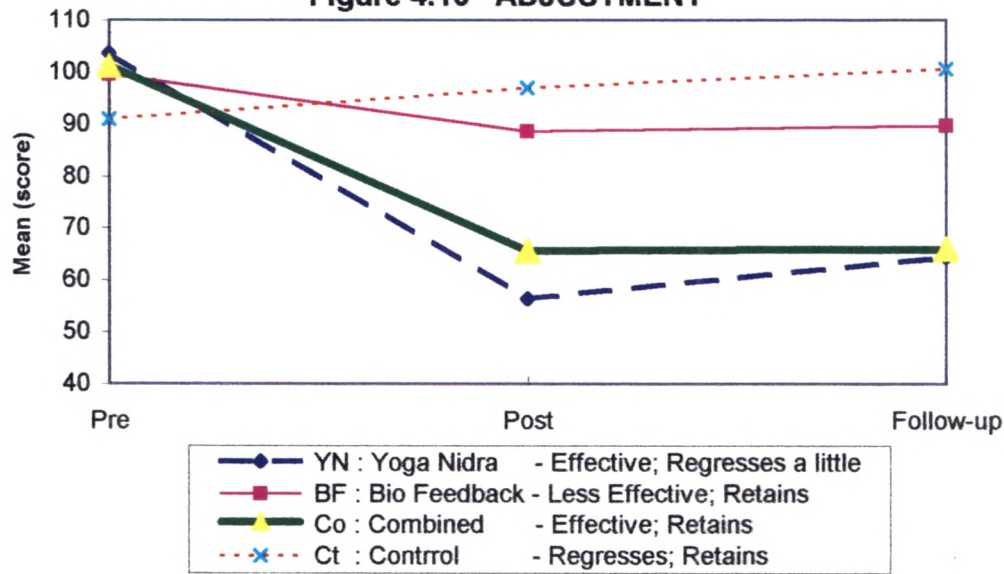
hypothesis *"There will be no differential impact of the intervention techniques on Adjustment scores"* is rejected at Pre-Follow-up level. When precise differences are brought out by post hoc comparisons, Yoga Nidra appears to be most effective in restoring subject's capacity to adjust, followed by Combined and Bio Feedback interventions. Deterioration is seen in the Control group.

Post-Follow-up comparisons

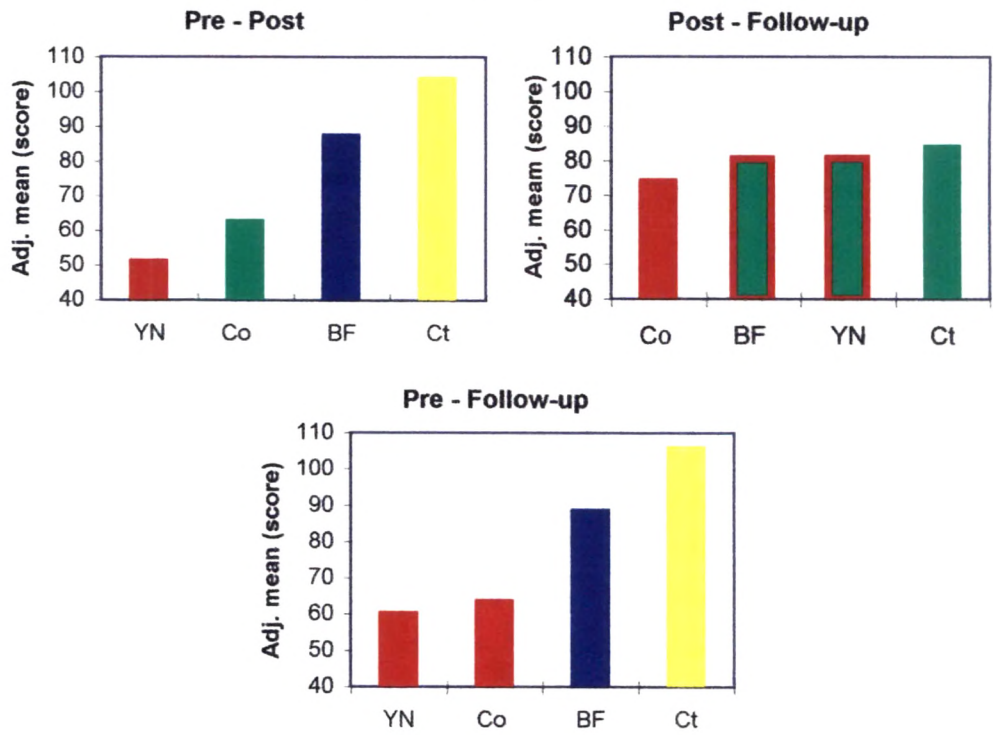
The comparison between immediate impact of interventions and the impact of interventions after two months, shows that the average Adjustment scores of the subjects in Yoga Nidra group increased by about 8 points. In Bio Feedback group it increased by 1 point. In the Combined group it remained almost the same. In the Control groups it increased by 4 points. The paired t-tests show border-line rise in Adjustment scores in case of Yoga Nidra intervention group whereas the change is not significant in all other groups. At Follow-up (two months after the interventions), it was observed that except for the Yoga Nidra group the impact was retained in all other groups. The ANCOVA confirms the differential impact of interventions at this level also. So the null hypothesis *"There will be no differential impact of the intervention techniques on Adjustment"* is rejected at Post-Follow-up level. Through Post Hoc comparison, when we look at the precise differences, only the Control group shows significant differences from the Combined group. All the intervention groups show mild and similar changes.

Variations in Adjustment scores from Pre to Post and Follow-up stages as well as variations in adjusted Adjustment scores in three Post Hoc comparisons are depicted graphically in Figure 4.10.

Figure 4.10 ADJUSTMENT



Post Hoc Comparisons



Interventions forming a homogeneous subset
at a level are indicated by the same colour

4.11. Analysis of SELF ESTEEM

TABLE 4.11A. Means and Standard Deviations of Self Esteem scores

| Intervention | N | Pre | | Post | | Follow-up | |
|---------------|----|-------|------|-------|------|-----------|------|
| | | Mean | SD | Mean | SD | Mean | SD |
| Yoga Nidra | 12 | 11.42 | 3.99 | 23.25 | 2.22 | 20.42 | 3.15 |
| Bio Feedback | 12 | 13.50 | 1.98 | 16.58 | 2.47 | 15.83 | 2.86 |
| Combined | 12 | 12.42 | 3.00 | 21.25 | 3.17 | 20.83 | 3.59 |
| Control | 12 | 15.08 | 2.61 | 13.75 | 2.86 | 13.75 | 2.83 |
| Entire Sample | 48 | 13.10 | 3.20 | 18.71 | 4.60 | 17.71 | 4.29 |

TABLE 4.11B. MANOVA-RM on Pre, Post and Follow-up Measures of Self Esteem

| Pillai's Multivariate Tests | Pillai's Value | Hypoth. df | Error df | Approx. F | Remarks |
|-----------------------------|----------------|------------|----------|-----------|---------|
| Self Esteem | 0.71694 | 2 | 43 | 54.45 | *** |
| Intervention By Self Esteem | 0.79547 | 6 | 88 | 9.69 | *** |
| Univariate F-tests | SS | df | MS | F | Remarks |
| Within Cells | 441.33 | 88 | 5.02 | | |
| Self Esteem | 857.68 | 2 | 428.84 | 85.51 | *** |
| Intervention By Self Esteem | 730.99 | 6 | 121.83 | 24.29 | *** |

*** Significant at 0.001 level

The first F value in the Pillai's Multivariate Table is 54.45 it indicates that there is a highly significant (0.001 level) variation in the Self Esteem between the three measures, taking all interventions together. The corresponding Univariate F value is 85.51, which confirms the same. The second F value in the Pillai's Multivariate Table is 9.69. It indicates that there is a highly significant (0.001 level) variation in the Self Esteem between the interventions and the three measures. The corresponding Univariate F value is 24.29, which confirms the same.

TABLE 4.11C. Paired t-test Analysis for Repeated Measures on Self Esteem

| Comparison | Intervention | t-value | df | Remarks |
|-------------------|--------------|---------|----|---------|
| Pre Vs Post | Yoga Nidra | 7.42 | 11 | *** |
| | Bio Feedback | 4.04 | 11 | ** |
| | Combined | 7.37 | 11 | *** |
| | Control | 4.00 | 11 | ** |
| Pre Vs Follow-up | Yoga Nidra | 8.33 | 11 | *** |
| | Bio Feedback | 2.76 | 11 | * |
| | Combined | 6.54 | 11 | *** |
| | Control | 3.22 | 11 | ** |
| Post Vs Follow-up | Yoga Nidra | 2.47 | 11 | * |
| | Bio Feedback | 2.14 | 11 | NS |
| | Combined | 1.60 | 11 | NS |
| | Control | 0.00 | 11 | NS |

NS Not Significant, * Sig. at 0.05 level, ** Sig. at 0.01 level, *** Sig. at 0.001 level

The Paired t-values for the **Pre versus Post** comparisons are 7.42 (sig. at 0.001 level) for Yoga Nidra, 4.04 (sig. at 0.01 level) for Bio Feedback, 7.37 (sig. at 0.001 level) for the Combined group and 4.00 (sig. at 0.01 level) for the Control group. The Paired t-values for the **Pre versus Follow-up** comparisons are 8.33 (sig. at 0.001 level) for Yoga Nidra, 2.76 (sig. at 0.05 level) for Bio Feedback, 6.54 (sig. at 0.001 level) for the Combined group and 3.22 (sig. at 0.01 level) for the Control group. The Paired t-values for the **Post versus Follow-up** comparisons are 2.47 (sig. at 0.05 level) for Yoga Nidra, 2.14 (not sig.) for Bio Feedback, 1.60 (not sig.) for the Combined group and 0.00 (not sig.) for the Control group.

TABLE 4.11D. ANCOVA on Post Self Esteem with Pre Self Esteem as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|-----------------------------|--------|----|--------|-------|---------|
| Covariate (Pre Self Esteem) | 77.16 | 1 | 77.16 | 27.38 | *** |
| Main Effects (Intervention) | 603.04 | 3 | 201.01 | | |
| Residual | 315.72 | 43 | 7.34 | | |
| Total | 995.92 | 47 | 21.19 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 2.96

| Mean Post Self Esteem duly adjusted for Pre Self Esteem (score) | Intervention | Ct | BF | Co | YN |
|--|--------------|----|----|----|----|
| 13.51 | Control | | | | |
| 16.54 | Bio Feedback | * | | | |
| 21.34 | Combined | * | * | | |
| 23.46 | Yoga Nidra | * | * | | |

* Significant at 0.05 level

Homogeneous Subsets

1. Control
2. Bio Feedback
3. Combined and Yoga Nidra

F value for the Post Self Esteem (with Pre Self Esteem as covariate) is 27.38. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the Combined and Yoga Nidra interventions form a homogeneous subset. Bio Feedback differs significantly from the other three groups. Likewise the Control group also differs significantly from the other three groups.

TABLE 4.11E. ANCOVA on Follow-up Self Esteem with Pre Self Esteem as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|-----------------------------|--------|----|--------|-------|---------|
| Covariate (Pre Self Esteem) | 0.72 | 1 | 0.72 | | |
| Main Effects (Intervention) | 504.20 | 3 | 168.07 | 20.13 | *** |
| Residual | 359.00 | 43 | 8.35 | | |
| Total | 863.92 | 47 | 18.38 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 3.16

| Mean Follow-up Self Esteem duly adjusted for Pre Self Esteem (score) | Intervention | Co | BF | Co | YN |
|---|--------------|----|----|----|----|
| 12.92 | Control | | | | |
| 15.67 | Bio Feedback | | | | |
| 21.12 | Combined | * | * | | |
| 21.13 | Yoga Nidra | * | * | | |

* Significant at 0.05 level

Homogeneous Subsets

1. Control and Bio Feedback
2. Combined and Yoga Nidra

F value for the Follow-up (with Pre Self Esteem as covariate) is 20.13. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the change in the adjusted Follow-up Self Esteem score in case of Control group was similar to the change in case of Bio Feedback intervention. The change in case of Combined and the Yoga Nidra interventions, is similar. Each of the Combined and Yoga Nidra interventions, differs significantly from the Control and Bio Feedback interventions.

TABLE 4.11F. ANCOVA on Follow-up Self Esteem with Post Self Esteem as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|------------------------------|--------|----|--------|------|---------|
| Covariate (Post Self Esteem) | 631.30 | 1 | 631.30 | 1.74 | NS |
| Main Effects (Intervention) | 25.19 | 3 | 8.40 | | |
| Residual | 207.43 | 43 | 4.82 | | |
| Total | 863.92 | 47 | 18.38 | | |

NS Not Significant

| Mean Follow-up Self Esteem duly adjusted for Post Self Esteem (score) | Intervention |
|--|--------------|
| 16.65 | Yoga Nidra |
| 17.60 | Bio Feedback |
| 17.86 | Control |
| 18.73 | Combined |

Homogeneous Subset

All interventions

F value for the Follow-up Self Esteem (with Post Self Esteem as covariate) is 1.74. It indicates that there is no significant differential effect of the interventions. Yoga Nidra, Bio Feedback, Combined and the Control group - all form a single homogeneous set.

DISCUSSION on SELF ESTEEM

The MANOVA-RM results for Self Esteem are presented in the tables above. These results indicate highly significant *Intrasubject* (within the group) and *Intersubject* (among the groups) differences in the Self Esteem. Paired t-tests and ANCOVAs (followed with Tukey's post hoc comparisons) were carried out at three levels (Pre-Post, Post-Follow-up and Pre-Follow-up), to study the kind of differential impact of the intervention techniques.

Pre-Post comparisons

The readings of Self Esteem scores show an average rise of about 12 points in Yoga Nidra group, 2 points in Bio Feedback group and 9 points in Combined group; and a fall of about 2 points in the Control group. The paired t-tests indicate highly significant increment in the Self Esteem in Yoga Nidra and Combined groups. In Bio Feedback group the increment is comparatively less. In the Control group there is a significant reduction in the Self Esteem. The ANCOVA confirms the differential impact of interventions at this level. So the null hypothesis "*There will be no differential impact of the intervention techniques on Self Esteem*" is rejected at Pre-Post level. The Post Hoc comparisons after the ANCOVAs give the precise differences, which reveal that the Combined and Yoga Nidra intervention groups show maximum and similar impact. The Bio Feedback intervention group shows minimum rise in Self Esteem scores. There is no deterioration in the Control group.

Pre-Follow-up comparisons

At this level, i.e., when the before intervention Self Esteem scores are compared with the readings taken two months after the intervention, there is an average increase of about 9 points in Yoga Nidra group, 2 points in Bio Feedback group, 8 points in Combined group. The Self Esteem scores decreased by about 1 point in the Control group. The paired t-tests indicate highly significant increment in the Self Esteem scores in Yoga Nidra and Combined intervention groups. The Bio Feedback group shows border-line increment in the Self Esteem scores. The Control group shows significant

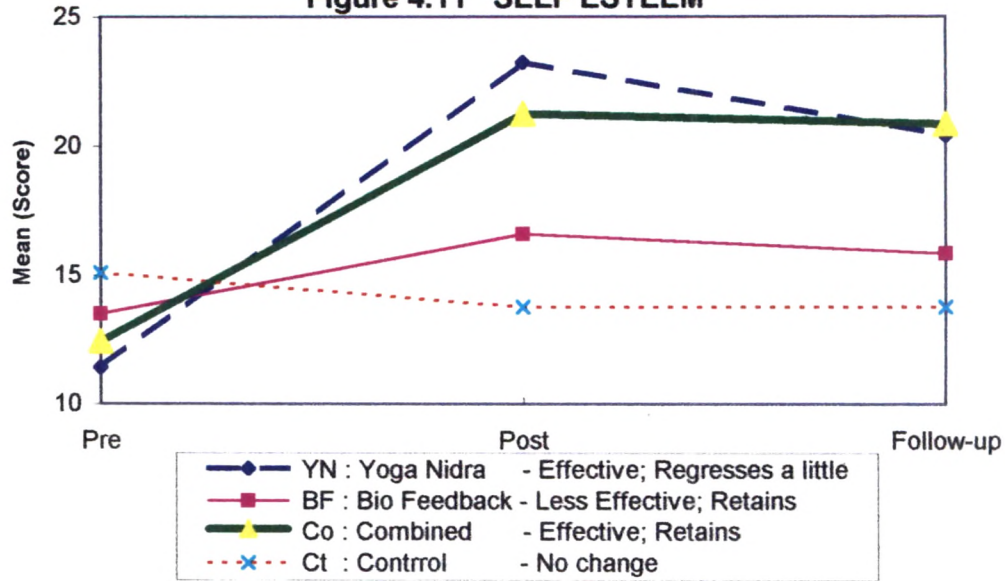
reduction in the Self Esteem scores. The *ANCOVA* confirms the differential impact of interventions at this level also. So the null hypothesis "*There will be no differential impact of the intervention techniques on Self Esteem scores*" is rejected at Pre-Follow-up level. When precise differences are brought out by **post hoc** comparisons, Yoga Nidra and Combined groups show maximum and similar increment in Self Esteem scores. In case of Bio Feedback intervention there is a border-line rise in Self Esteem whereas the Control group shows border-line decrease in Self Esteem.

Post-Follow-up comparisons

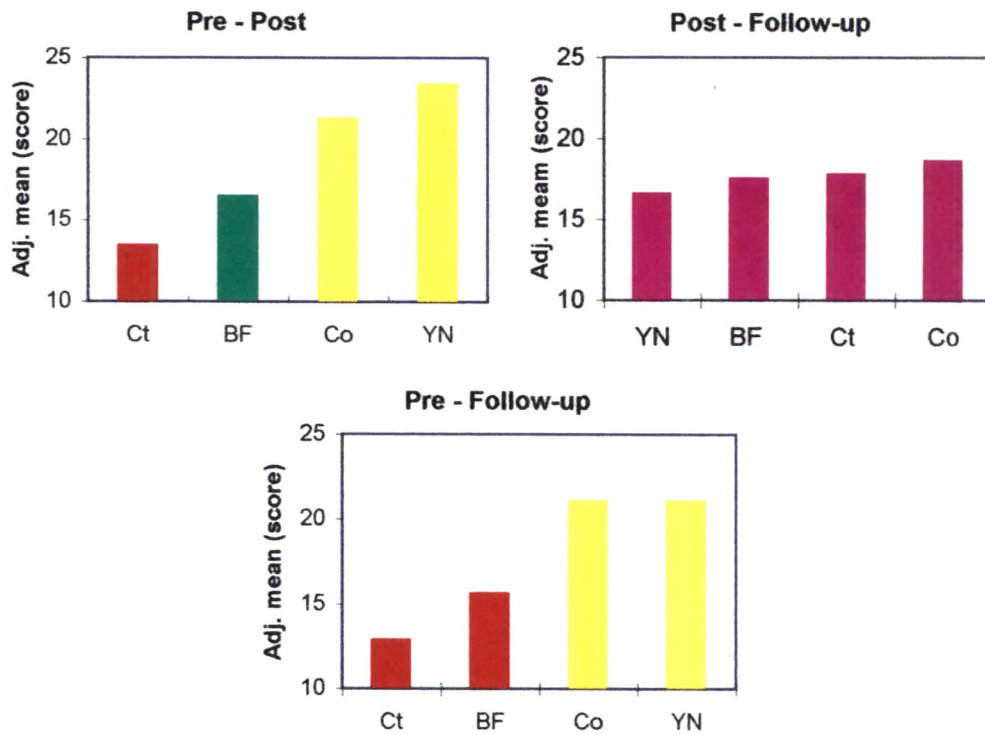
The comparison between immediate impact of interventions and the impact of interventions after two months, shows that the average Self Esteem scores of the subjects on an average decreased by 3 points in Yoga Nidra group, by 1 points in Bio Feedback and by 1 point in combined group. In the Control groups it remained the same. The **paired t-tests** show border-line rise in Self Esteem scores in case of Yoga Nidra. All other groups show no significant change in Self Esteem. At Follow-up (two months after the interventions), Yoga Nidra group shows border-line regression and all the other groups show no change. The *ANCOVA* shows no differential impact of interventions at this level. So the null hypothesis "*There will be no differential impact of the intervention techniques on Self Esteem*" is accepted at Post-Follow-up level.

Variations in Self Esteem scores from Pre to Post and Follow-up stages as well as variations in adjusted Self Esteem scores in three Post Hoc comparisons are depicted graphically in Figure 4.11.

Figure 4.11 SELF ESTEEM



Post Hoc Comparisons



Interventions forming a homogeneous subset at a level are indicated by the same colour

4.12 Analysis of MOVING AROUND ENNEAGRAM (MAE)

TABLE 4.12A. Means and Standard Deviations of MAE scores

| Intervention | N | Pre score | | Post score | | Follow-up score | |
|---------------|----|-----------|------|------------|------|-----------------|------|
| | | Mean | SD | Mean | SD | Mean | SD |
| Yoga Nidra | 12 | 5.42 | 2.43 | 20.17 | 2.37 | 16.42 | 2.31 |
| Bio Feedback | 12 | 9.17 | 1.70 | 15.42 | 1.78 | 13.83 | 1.53 |
| Combined | 12 | 7.33 | 1.30 | 18.25 | 1.82 | 16.50 | 2.68 |
| Control | 12 | 10.42 | 1.31 | 10.58 | 2.84 | 10.83 | 2.44 |
| Entire Sample | 48 | 8.08 | 2.55 | 16.10 | 4.24 | 14.40 | 3.22 |

TABLE 4.12B. MANOVA-RM on Pre, Post and Follow-up Measures of MAE

| Pillai's Multivariate Tests | Pillai's Value | Hypoth. df | Error df | Approx. F | Remarks |
|-----------------------------|----------------|------------|----------|-----------|---------|
| Movement | 0.92721 | 2 | 43 | 273.87 | *** |
| Intervention By Movement | 0.90281 | 6 | 88 | 12.07 | *** |
| Univariate F-tests | SS | df | MS | F | Remarks |
| Within Cells | 232.67 | 88 | 2.64 | | |
| Movements | 1713.60 | 2 | 856.80 | 324.06 | *** |
| Intervention By Movement | 776.40 | 6 | 129.40 | 48.94 | *** |

*** Significant at 0.001 level

The first F value in the Pillai's Multivariate Table is 273.87 it indicates that there is a highly significant (0.001 level) variation in the MAE scores between the three measures, taking all interventions together. The corresponding Univariate F value is 324.06, which confirms the same. The second F value in the Pillai's Multivariate Table is 12.07. It indicates that there is a highly significant (0.001 level) variation in the MAE scores between the interventions and the three measures. The corresponding Univariate F value is 48.94, which confirms the same.

TABLE 4.12C. Paired t-test Analysis for Repeated Measures on MAE

| Comparison | Intervention | t-value | df | Remarks |
|-------------------|--------------|---------|----|---------|
| Pre Vs Post | Yoga Nidra | 16.93 | 11 | *** |
| | Bio Feedback | 9.25 | 11 | *** |
| | Combined | 23.32 | 11 | *** |
| | Control | 0.25 | 11 | NS |
| Pre Vs Follow-up | Yoga Nidra | 15.33 | 11 | *** |
| | Bio Feedback | 9.11 | 11 | *** |
| | Combined | 9.47 | 11 | *** |
| | Control | 0.79 | 11 | NS |
| Post Vs Follow-up | Yoga Nidra | 6.48 | 11 | *** |
| | Bio Feedback | 6.09 | 11 | *** |
| | Combined | 1.78 | 11 | NS |
| | Control | 1.39 | 11 | NS |

NS Not Significant, * Sig. at 0.05 level, ** Sig. at 0.01 level, *** Sig. at 0.001 level

The Paired t-values for the **Pre versus Post** comparisons are 16.93 (sig. at 0.001 level) for Yoga Nidra, 9.25 (sig. at 0.001 level) for Bio Feedback, 23.32 (sig. at 0.001 level) for the Combined group and 0.25 (not sig.) for the Control group. The Paired t-values for the **Pre versus Follow-up** comparisons are 15.53 (sig. at 0.001 level) for Yoga Nidra, 9.11 (sig. at 0.001 level) for Bio Feedback, 9.47 (sig. at 0.001 level) for the Combined group and 0.79 (not sig.) for the Control group. The Paired t-values for the **Post versus Follow-up** comparisons are 6.48 (sig. at 0.001 level) for Yoga Nidra, 6.09 (sig. at 0.001 level) for Bio Feedback, 1.78 (not sig.) for the Combined group and 1.39 (not sig.) for the Control group.

TABLE 4.12D. ANCOVA on Post MAE with Pre MAE as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|-----------------------------|--------|----|--------|-------|---------|
| Covariate (Pre MAE) | 220.17 | 1 | 220.17 | | |
| Main Effects (Intervention) | 425.83 | 3 | 141.94 | 30.44 | *** |
| Residual | 200.48 | 43 | 4.66 | | |
| Total | 846.48 | 47 | 18.01 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 2.36

| Mean Post MAE duly adjusted for Pre MAE (score) | Intervention | Ct | BF | Co | YN |
|--|--------------|----|----|----|----|
| 9.65 | Control | | | | |
| 14.98 | Bio Feedback | * | | | |
| 18.54 | Combined | * | * | | |
| 21.22 | Yoga Nidra | * | * | * | |

* Significant at 0.05 level

Homogeneous Subsets None

F value for the Post MAE score (with Pre MAE score as covariate) is 30.44. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the change in the adjusted Post MAE score for each intervention differs significantly from each of the other interventions.

TABLE 4.12E. ANCOVA on Follow-up MAE with Pre MAE as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|-----------------------------|--------|----|-------|-------|---------|
| Covariate (Pre MAE) | 64.66 | 1 | 64.66 | 14.45 | *** |
| Main Effects (Intervention) | 212.27 | 3 | 70.76 | | |
| Residual | 210.55 | 43 | 4.90 | | |
| Total | 487.48 | 47 | 10.37 | | |

*** Significant at 0.001 level

Post Hoc Comparisons by Tukey's HSD Procedure at 0.05 level:

Critical HSD value of the adjusted mean at 0.05 level = 2.42

| Mean Follow-up MAE duly adjusted for Pre MAE (score) | Intervention | Ct | BF | Co | YN |
|---|--------------|----|----|----|----|
| 9.97 | Control | | | | |
| 13.43 | Bio Feedback | * | | | |
| 16.78 | Combined | * | * | | |
| 17.42 | Yoga Nidra | * | * | | |

* Significant at 0.05 level

Homogeneous Subsets

1. Control
2. Bio Feedback
2. Combined and Yoga Nidra

F value for the Post MAE score (with Pre MAE score as covariate) is 14.45. It indicates highly significant differential effect of the interventions. Post Hoc comparisons show that the Combined and Yoga Nidra interventions form a homogeneous subset. Bio Feedback differs significantly from the other three groups. Likewise the Control group also differs significantly from the other three groups.

TABLE 4.12F. ANCOVA on Follow-up MAE with Post MAE as covariate

| Source of Variation | SS | df | MS | F | Remarks |
|-----------------------------|--------|----|--------|------|---------|
| Covariate (Post MAE) | 326.88 | 1 | 326.88 | | |
| Main Effects (Intervention) | 10.72 | 3 | 3.57 | 1.03 | NS |
| Residual | 149.88 | 43 | 3.49 | | |
| Total | 487.48 | 47 | 10.37 | | |

NS Not Significant

| Mean Follow-up MAE duly adjusted for Post MAE (score) | Intervention |
|--|--------------|
| 13.99 | Yoga Nidra |
| 14.14 | Control |
| 14.25 | Bio Feedback |
| 15.22 | Combined |

Homogeneous Subsets All interventions

F value for the Follow-up MAE score (with Post MAE score as covariate) is 1.03. It indicates that there is no significant differential effect of the interventions. Yoga Nidra, Bio Feedback, Combined and the Control group - all form a single homogeneous set.

DISCUSSION on MOVING AROUND ENNEAGRAM (MAE)

The MANOVA-RM results for MAE are presented in the tables above. These results indicate highly significant *Intrasubject* (within the group) and *Intersubject* (among the groups) differences in the MAE. Paired t-tests and ANCOVAs (followed with Tukey's post hoc comparisons) were carried out at three levels (Pre-Post, Post-Follow-up and Pre-Follow-up), to study the kind of differential impact of the intervention techniques.

Pre-Post comparisons

The readings of MAE show an average rise of about 15 points in Yoga Nidra group, 6 points in Bio Feedback group, 10 points in Combined group. There is almost no change in the Control group. The **paired t-tests** indicate highly significant increment in the MAE scores in all the three intervention groups whereas the change in MAE score in the Control group is not significant. The ANCOVA confirms the differential impact of interventions at this level. So the null hypothesis "*There will be no differential impact of the intervention techniques on Moving Around Enneagram (MAE)*" is rejected at Pre-Post level. The **Post Hoc** comparisons after the ANCOVAs give the precise differences, which reveal that the Yoga Nidra is the most effective technique in increasing the MARE score, followed by Combined and Bio Feedback interventions. There is no improvement in the Control group.

Pre-Follow-up comparisons

At this level, i.e., when the before intervention MAE scores are compared with the readings taken two months after the intervention, the average increase is about 11 points in Yoga Nidra group, 5 points in Bio Feedback group, 9 points in Combined group. The MAE score almost remained the same in the Control group. The **paired t-tests** indicate highly significant increment in MAE scores in all the three intervention groups. The Control group shows no significant change in MAE score. The ANCOVA confirms the differential impact of interventions at this level also. So the null hypothesis "*There will be no differential impact of the intervention techniques on Moving Around Enneagram*"

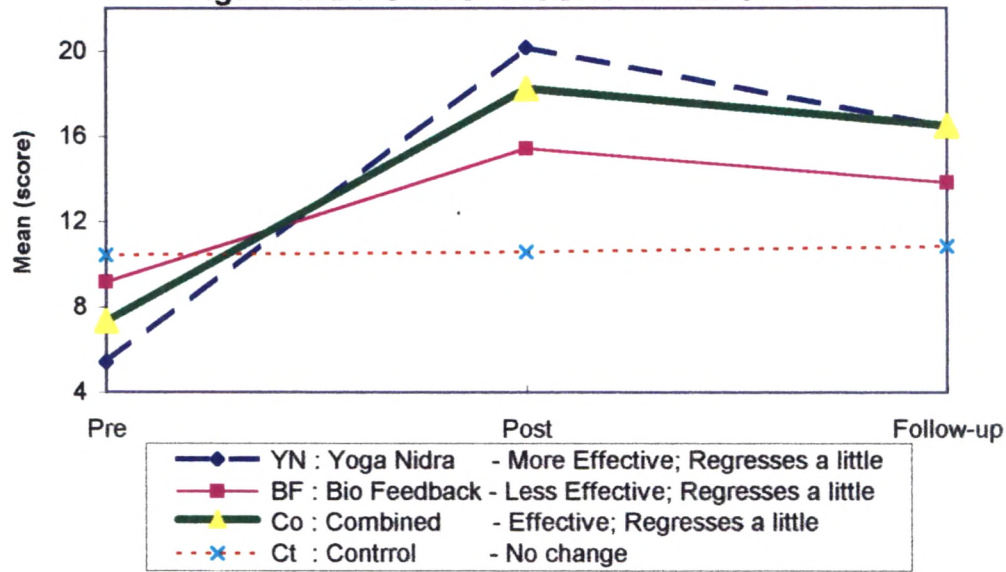
(MAE)" is rejected at Pre-Follow-up level. When precise differences are brought out by **post hoc** comparisons, the Yoga Nidra intervention shows maximum impact on MAE, followed by the Combined and Bio Feedback interventions. The Control group shows no impact.

Post-Follow-up comparisons

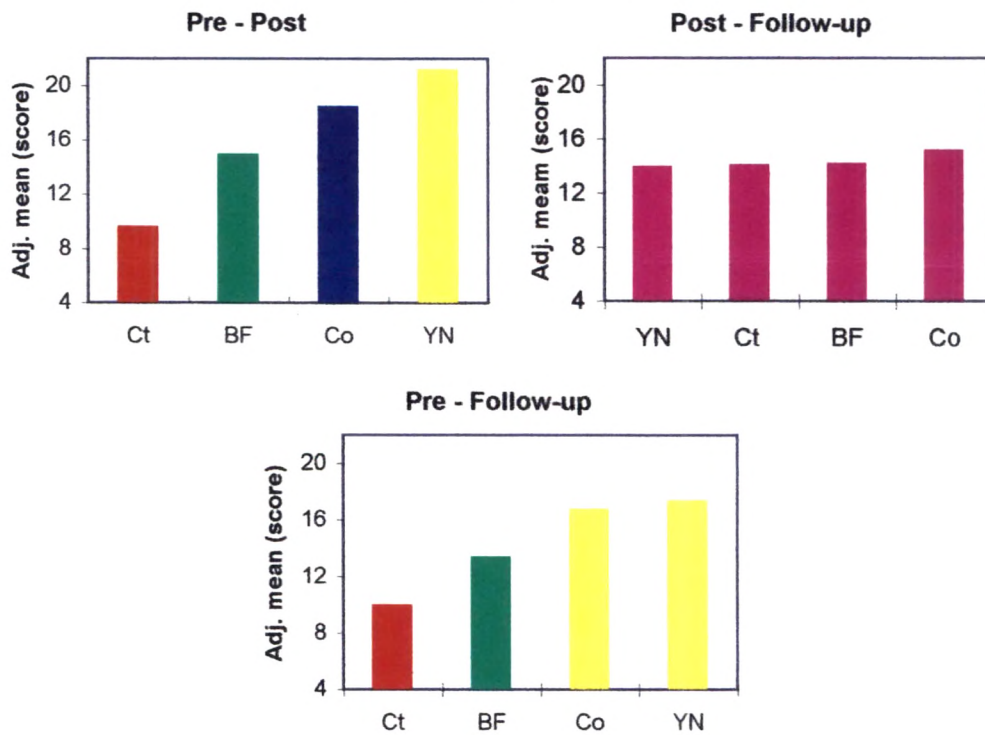
The comparison between immediate impact of interventions and the impact of interventions after two months, shows that the average MAE score of the subjects in Yoga Nidra group decreased by about 4 points. In each of the Bio Feedback and Combined groups it decreased by 2 points. The Control group shows almost no change. The **paired t-tests** shows highly significant reduction in MAE score in case of Yoga Nidra and Bio Feedback groups. The change in the Combined and Control groups is not significant. At Follow-up (two months after the interventions), it is observed that the impact of Combined intervention is retained for MAE whereas the effect of Bio Feedback and Yoga Nidra groups show regression. Control group shows no change. The **ANCOVA** confirms no differential impact of interventions at this level. So the null hypothesis "*There will be no differential impact of the intervention techniques on Moving Around Enneagram (MAE)*" is accepted at Post-Follow-up level.

Variations in MAE scores from Pre to Post and Follow-up stages as well as variations in adjusted MAE scores in three **Post Hoc** comparisons are depicted graphically in Figure 4.12.

Figure 4.12 MOVING AROUND ENNEAGRAM



Post Hoc Comparisons



Interventions forming a homogeneous subset at a level are indicated by the same colour

4.13. PERSONAL STYLES

TABLE 4.13.1 Mean and SD of Personal Style scores

| Intervention → | | Yoga Nidra | | Bio Feedback | | Combined | | Control | |
|---------------------------|------|------------|-----|--------------|-----|----------|-----|---------|-----|
| Dimension | | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| Intro- version | Pre | 17.9 | 6.8 | 20.1 | 4.9 | 20.6 | 4.7 | 19.4 | 6.0 |
| | Post | 20.1 | 5.7 | 20.2 | 4.7 | 20.5 | 3.3 | 19.6 | 5.8 |
| | F-up | 19.9 | 5.3 | 20.3 | 4.6 | 20.6 | 3.5 | 19.3 | 5.8 |
| Extro- version | Pre | 22.1 | 6.8 | 19.9 | 4.9 | 19.4 | 4.7 | 20.6 | 6.0 |
| | Post | 19.9 | 5.7 | 19.8 | 4.7 | 19.5 | 3.3 | 20.4 | 5.8 |
| | F-up | 20.1 | 5.3 | 19.8 | 4.6 | 19.4 | 3.5 | 20.8 | 5.8 |
| Intuitive | Pre | 12.7 | 6.1 | 13.2 | 5.1 | 13.6 | 5.3 | 10.8 | 2.6 |
| | Post | 15.8 | 4.4 | 14.0 | 5.1 | 15.7 | 3.4 | 11.0 | 2.6 |
| | F-up | 16.5 | 4.6 | 14.2 | 5.2 | 16.6 | 2.6 | 10.7 | 2.6 |
| Sensing | Pre | 27.3 | 6.1 | 26.8 | 5.1 | 26.4 | 5.3 | 29.3 | 2.6 |
| | Post | 24.2 | 4.4 | 26.0 | 5.1 | 24.3 | 3.4 | 29.0 | 2.6 |
| | F-up | 23.5 | 4.6 | 25.8 | 5.2 | 23.4 | 2.6 | 29.3 | 2.6 |
| Thinking | Pre | 17.7 | 7.0 | 22.6 | 6.3 | 19.3 | 4.8 | 20.4 | 5.6 |
| | Post | 17.3 | 4.4 | 21.5 | 5.5 | 19.4 | 3.9 | 20.5 | 5.7 |
| | F-up | 17.0 | 3.7 | 21.3 | 5.3 | 19.4 | 4.3 | 20.3 | 5.7 |
| Feeling | Pre | 22.3 | 7.0 | 17.4 | 6.3 | 20.8 | 4.8 | 19.6 | 5.6 |
| | Post | 22.8 | 4.4 | 18.5 | 5.5 | 20.6 | 3.9 | 19.5 | 5.7 |
| | F-up | 23.0 | 3.7 | 18.7 | 5.3 | 20.6 | 4.3 | 19.7 | 5.7 |
| Perceiving | Pre | 13.7 | 6.0 | 19.9 | 5.2 | 18.8 | 6.6 | 15.0 | 5.7 |
| | Post | 17.0 | 4.3 | 20.3 | 4.9 | 19.2 | 4.3 | 15.0 | 5.5 |
| | F-up | 17.1 | 3.9 | 20.0 | 4.9 | 19.3 | 3.3 | 14.4 | 6.3 |
| Judging | Pre | 26.3 | 6.0 | 20.1 | 5.2 | 21.2 | 6.6 | 25.0 | 5.7 |
| | Post | 23.0 | 4.3 | 19.8 | 4.9 | 20.8 | 4.3 | 25.0 | 5.5 |
| | F-up | 22.8 | 3.6 | 20.0 | 4.9 | 20.8 | 3.3 | 25.2 | 5.7 |

DISCUSSION on PERSONAL STYLES

No change in the basic Typology took place, for any subject in any group. At Pre-Post level some intra-dimensional shifts due to the intervention giving **balancing effect** to the personality were observed. Mostly these impacts were retained in the Post-Follow-up level. These effects are summarized below.

TABLE 4.13.2 Balancing effect within Typology

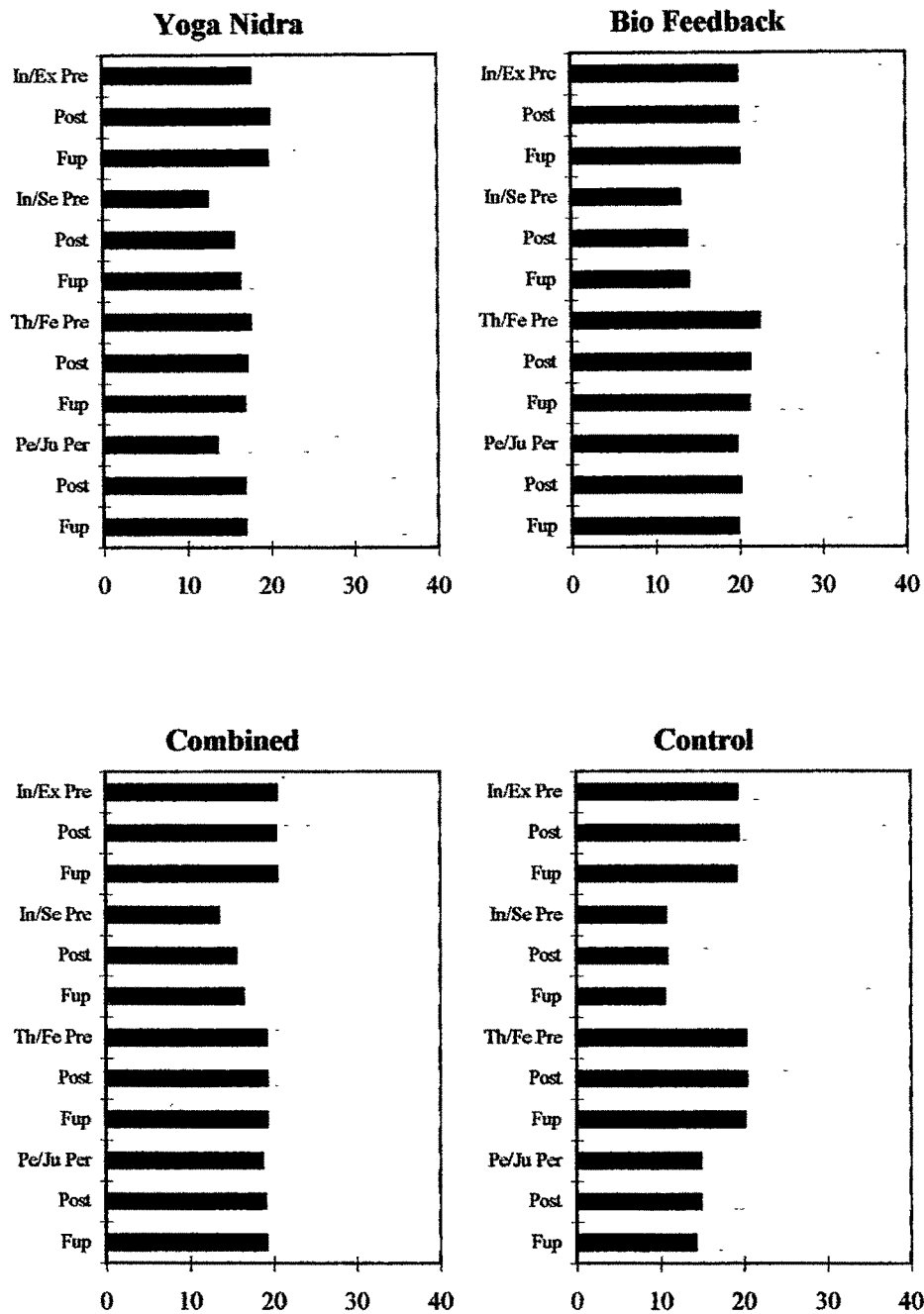
| Group | Dimension | Pre-Post level | Post-F-up level |
|--------------|--------------------|---------------------------|--------------------|
| Yoga Nidra | Intro/Extroversion | Balancing effect observed | Balance maintained |
| | Intuitive/Sensing | Balancing effect observed | Balance progressed |
| | Thinking/Feeling | No change | No change |
| | Perceiving/Judging | Balancing effect observed | Balance maintained |
| Bio Feedback | Intro/Extroversion | No change | No change |
| | Intuitive/Sensing | No change | No change |
| | Thinking/Feeling | Balancing effect observed | Balance maintained |
| | Perceiving/Judging | No change | No change |

..... continued

| Group | Dimension | Pre-Post level | Post-Follow-up level |
|----------|--------------------|---------------------------|----------------------|
| Combined | Intro/Extroversion | No change | No change |
| | Intuitive/Sensing | Balancing effect observed | Balance progressed |
| | Thinking/Feeling | No change | No change |
| | Perceiving/Judging | No change | No change |
| Control | Intro/Extroversion | No change | No change |
| | Intuitive/Sensing | No change | No change |
| | Thinking/Feeling | No change | No change |
| | Perceiving/Judging | No change | No change |

Average scores of all the four groups are presented graphically in Figure 4.13, which clearly depicts the observed balancing effects within the Typology.

Figure 4. 13 Personality Styles



4.14. EGO STATES

TABLE 4.14.1 Mean and SD of Ego State scores

| Intervention → | | Yoga Nidra | | Bio Feedback | | Combined | | Control | |
|------------------|------|------------|-----|--------------|-----|----------|-----|---------|-----|
| Dimension | | Mean | SD | Mean | SD | Mean | SD | Mean | SD |
| Critical parent | Pre | 16.3 | 3.7 | 17.9 | 3.4 | 17.8 | 3.9 | 17.8 | 3.9 |
| | Post | 11.9 | 3.4 | 15.9 | 3.3 | 14.3 | 2.7 | 17.8 | 3.8 |
| | F-up | 12.0 | 3.0 | 16.3 | 3.5 | 13.4 | 2.2 | 17.8 | 3.8 |
| Nurturing parent | Pre | 10.0 | 5.4 | 9.8 | 4.1 | 8.3 | 2.2 | 8.7 | 1.5 |
| | Post | 13.5 | 4.1 | 11.9 | 3.5 | 11.8 | 1.5 | 9.3 | 1.9 |
| | F-up | 13.4 | 3.7 | 12.4 | 3.6 | 12.8 | 1.4 | 9.4 | 1.7 |
| Adult | Pre | 10.0 | 1.0 | 13.3 | 4.6 | 11.8 | 2.1 | 12.5 | 3.2 |
| | Post | 14.7 | 3.1 | 16.1 | 4.1 | 15.3 | 1.8 | 12.7 | 3.3 |
| | F-up | 15.5 | 2.1 | 15.8 | 3.8 | 17.5 | 2.4 | 12.7 | 3.3 |
| Natural child | Pre | 8.7 | 3.5 | 10.3 | 3.7 | 7.5 | 2.0 | 9.3 | 2.7 |
| | Post | 11.7 | 3.4 | 11.2 | 2.7 | 11.3 | 3.6 | 8.8 | 2.5 |
| | F-up | 10.8 | 3.7 | 11.4 | 2.7 | 12.0 | 3.3 | 8.9 | 2.6 |
| Little professor | Pre | 9.5 | 5.1 | 7.8 | 3.7 | 6.6 | 1.6 | 6.8 | 1.8 |
| | Post | 12.7 | 3.4 | 8.7 | 3.5 | 9.3 | 1.4 | 6.3 | 2.0 |
| | F-up | 12.6 | 3.0 | 9.1 | 3.4 | 9.8 | 2.1 | 6.3 | 1.9 |
| Adapted child | Pre | 15.4 | 5.1 | 15.8 | 2.7 | 17.4 | 4.2 | 15.5 | 3.2 |
| | Post | 12.8 | 3.8 | 14.7 | 2.8 | 13.9 | 3.3 | 15.4 | 3.8 |
| | F-up | 12.6 | 3.9 | 14.7 | 2.7 | 12.8 | 2.9 | 15.8 | 3.1 |

DISCUSSION on EGO STATES

Ego States as described in Transactional Analysis by Dr. Eric Berne has been assessed in this study, without giving the subjects any formal training or information about them. The purpose is to explore the impact of various interventions on the Ego States of the subjects. The effect of the interventions on the Ego States is summarized below.

TABLE 4.14.2 Change in Ego States due to the Interventions

| Group | Ego State | Pre-Post level | Post-Follow-up level |
|--------------|------------------|------------------------|----------------------|
| Yoga Nidra | Critical Parent | Decreased (Progressed) | Progress retained |
| | Nurturing Parent | Increased (Progressed) | Regressed a little |
| | Adult | Increased (Progressed) | Progressed further |
| | Natural Child | Increased (Progressed) | Regressed a little |
| | Little Professor | Increased (Progressed) | Progress retained |
| | Adapted Child | Decreased (Progressed) | Regressed |
| Bio Feedback | Critical Parent | Decreased (Progressed) | Retained |
| | Nurturing Parent | Increased (Progressed) | Retained |
| | Adult | Increased (Progressed) | Retained |
| | Natural Child | Increased (Progressed) | Retained |
| | Little Professor | Increased (Progressed) | Retained |
| | Adapted Child | Decreased (Progressed) | Retained |

..... continued

| Group | Ego State | Pre-Post level | Post-Follow-up level |
|---------------|------------------|------------------------|----------------------|
| Combined | Critical Parent | Decreased (Progressed) | Progressed further |
| | Nurturing Parent | Increased (Progressed) | Progressed further |
| | Adult | Increased (Progressed) | Progressed further |
| | Natural Child | Increased (Progressed) | Progressed further |
| | Little Professor | Increased (Progressed) | Progressed further |
| | Adapted Child | Decreased (Progressed) | Progressed further |
| Control group | Critical Parent | No effect | No effect |
| | Nurturing Parent | No effect | No effect |
| | Adult | No effect | No effect |
| | Natural Child | No effect | No effect |
| | Little Professor | No effect | No effect |
| | Adapted Child | No effect | No effect |

The Ego States scores at Pre, Post and Follow-up for each intervention are presented graphically in Figure 4.14.

Summary and conclusion of the study is presented in the next chapter.

Figure 4.14 EGO STATES

