

# Effect of Asanas and Pranayama on Self Concept of School Going Children

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**Abstract-** The purpose of the study was to determine the effect of Asanas and Pranayama on self concept (Behaviour, Intellectual and school status, Physical appearance and attributes, Anxiety, Popularity, Happiness and satisfaction) of school going children. 120 subjects were equally assigned to the four groups by using random sampling procedure i.e. three experimental groups and one control group. The experimental Group A was administered Asanas, Group B was administered Pranayama and Group C was administered combination of Asana Pranayama and Group D control group was given no training of an experimental period of twelve weeks. Analysis of covariance was used exclusively to compare the effect of three yogic experimental treatments programme for school going children. After statistical analysis findings show significant effect of all three experimental groups.

**Index Terms-** Asana, Pranayama, and self concept.

- To compare the effect of Asanas and Pranayama and their combination on self concept level of school going children.
- To compare the three treatments and its effect on the self concept level.

## III. HYPOTHESES

**H1** There will be significant effect of Asanas Practice on **self concept level** of school going children.

**H2** There will be significant effect of Pranayama Practice on **self concept level** of school going children.

**H3** There will be significant effect of Asana Pranayama Practice on **self concept level** of school going children.

**H4** There will not be any significant difference between three treatment groups.

## I. INTRODUCTION

Yoga, the wealth of India, is one of the greatest gifts of India to the world. Part of daily routine for the Indians for the years. Today yoga is popular not so much as a system of philosophy as a system of practical discipline. The application of yogic techniques is considered beneficial for health and cure of certain diseases and for improving general efficiency of individual in different fields, yoga is being utilized from the most fundamentally personal to the social and educational implications of the society as a whole. No matter how times and life styles change the judgment of the ancient sages in matters relating to life and conduct is still relevant. Even though our attitude to the nature of yoga itself may be different from those who were its instigators. In its evolution, its wisdom applies. It is also a spiritual pursuit for many seekers of truth. In the modern world, western countries like America use yoga as a tool for mental, physical and spiritual upliftment.

## II. OBJECTIVES OF THE STUDY

- To study the effect of Asanas on self concept level of school going children.
- To study the effect of Pranayama on self concept level of school going children.
- To study the combination effect of Asana Pranayama on self concept level of school going children.

## IV. SELECTION OF SUBJECTS

One hundred twenty (120) school going boys were selected randomly as subjects in the age group of 8-10 years from Muni International School, A-2/16-18, Mohan Garden, Uttam Nagar New Delhi-110059, India. The subjects were divided into three treatment groups and one control group using random method. Group A was allotted Asanas treatment group consisted of 30 subjects, Group B was allotted Pranayama treatment group consisted of 30 subjects, Group C was allotted combination of Asana Pranayama treatment group consisted of 30 subjects and Group D control group consisted of 30 subjects. The study was confined to 12 weeks of training programme.

## V. EXPERIMENTAL PROTOCOL

A period of twelve weeks training programme. Experimental population of 90 subjects were assembled in Activity Hall at Muni International School, A-2/16-18, Mohan Garden, Uttam Nagar, New Delhi-110059, India. Experimental training was executed from 9:00 AM onwards for 45 minutes, for six days a week and Sunday has been observed as weekly off. Each subject of the experimental group was ready to learn Asanas and Pranayamas. Group 'A' acts as Asanas Group, 'B' acts as Pranayama group, Group 'C' acts as Combination of Asana and Pranayama group and Group 'D' acts as control group which did not participate in the training programme. The subjects of experimental group 'A' practiced Asana (Surya Namaskar,

Sarvangasana, Matsyasana, Halasana, Bhujangasana, Shalvhasana, Dhanurasana, [Chakrasana](#), Ardha Matsyendrasana, Paschimottanasana, Vajrasana, Yogamudra, Standing kati chakrasana, Tadasana and Shavasana) and group 'B' practiced Pranayama (Anuloma Vilom and Bhastrika) and group 'C' practiced combination of Asana and Pranayama (Surya Namaskar, Sarvangasana, Matsyasana, Halasana, Bhujangasana, Shalvhasana, Dhanurasana, [Chakrasana](#), Ardha Matsyendrasana, Paschimottanasana, Vajrasana, Yogamudra, Standing kati chakrasana, Tadasana ,Shavasana, Anuloma Vilom pranayama and Bhastrika pranayama).

VI. TOOL USED

Self concept scores of the subject were obtained by using children's self concept scale (CSCS) by Dr. S.P Ahluwalia and Dr. Hari Shankar Singh.

VII. RESULTS

**TABLE-1  
DESCRIPTIVE STATISTICS OF THE DATA MEASURED  
IN THE POST TESTING BEHAVIOUR**

| TREATMENT GROUP       | MEAN  | STD. DEVIATION | N   |
|-----------------------|-------|----------------|-----|
| Asanas Group          | 11.66 | 2.46           | 30  |
| Pranayama Group       | 11.96 | 2.73           | 30  |
| Asana Pranayama Group | 11.93 | 2.72           | 30  |
| Control Group         | 9.36  | 2.39           | 30  |
| Total                 | 11.23 | 2.77           | 120 |

Table no.1 indicates the values of descriptive statistics of the experimental Groups (Asanas Group, Pranayama Group, Asana Pranayama Group) & Control Group for psychological variable of behaviour, which shows that the mean and S.D. values of Asanas Group, Pranayama Group, Asana Pranayama Group and the Control Group were found to be 11.66±2.46, 11.96±2.73, 11.93±2.72 and 9.36±2.39 respectively. Total the same was 11.23±2.77.

**TABLE-4  
POST HOC COMPARISON FOR THE GROUP MEANS IN POST-MEASUREMENT ADJUSTED WITH THE INITIAL DIFFERENCES BEHAVIOUR**

| (I) TREATMENT GROUP | (J) TREATMENT GROUP | MEAN DIFFERENCE (I-J) | SIG. <sup>a</sup> (p-value) |
|---------------------|---------------------|-----------------------|-----------------------------|
| Asanas Group        | Pranayama Group     | -0.25                 | 0.62                        |

**TABLE-2  
DESCRIPTIVE STATISTICS OF THE DATA MEASURED  
IN THE POST-TESTING AFTER ADJUSTMENT WITH  
THE INITIAL DIFFERENCE BEHAVIOUR**

| TREATMENT GROUP       | MEAN               | STD. ERROR | 95% CONFIDENCE INTERVAL |             |
|-----------------------|--------------------|------------|-------------------------|-------------|
|                       |                    |            | LOWER BOUND             | UPPER BOUND |
| Asanas Group          | 11.56 <sup>a</sup> | 0.37       | 10.82                   | 12.30       |
| Pranayama Group       | 11.82 <sup>a</sup> | 0.37       | 11.08                   | 12.56       |
| Asana Pranayama Group | 12.07 <sup>a</sup> | 0.37       | 11.33                   | 12.81       |
| Control Group         | 9.46 <sup>a</sup>  | 0.37       | 8.72                    | 10.21       |

(a) Covariates appearing in the model are evaluated at the following values: pre behaviour = 8.86

The mean and standard error of different post-testing Groups after adjustment have been shown in table 2. Which is for Asanas Group 11.56 & 0.37, Pranayama Group 11.82 & 0.37, Asana Pranayama Group 12.07 & 0.37 and Control Group 9.46 & 0.37.

**TABLE-3  
ANCOVA TABLE FOR THE POST-TEST DATA ON  
BEHAVIOUR**

| SOURCE          | SUM OF SQUARES | DF  | MEAN SQUARE | F     | SIG. (p-value) |
|-----------------|----------------|-----|-------------|-------|----------------|
| Pre behavior    | 304.72         | 1   | 304.72      | 72.34 | 0.00           |
| Treatment Group | 128.38         | 3   | 42.79       | 10.16 | 0.00           |
| Error           | 484.36         | 115 | 4.21        |       |                |
| Corrected Total | 917.46         | 119 |             |       |                |

Table no. 3 indicates the values test of difference between the subject effects, which shows that there was a significant difference in pre test values of psychological variable of behaviour for the four selected Groups, as the value was found to be 72.34, which proves to be the base of Analysis of Co-Variance. Also, a significant difference was found between the post test values of the experimental and Control Group as the value was found to be 10.16, which was significant at 0.05 level.

|                       |                       |        |      |
|-----------------------|-----------------------|--------|------|
|                       | Asana Pranayama Group | -0.51  | 0.33 |
|                       | Control Group         | 2.09*  | 0.00 |
| Pranayama Group       | Asanas Group          | 0.25   | 0.62 |
|                       | Asana Pranayama Group | -0.25  | 0.63 |
|                       | Control Group         | 2.35*  | 0.00 |
| Asana Pranayama Group | Asanas Group          | 0.51   | 0.33 |
|                       | Pranayama Group       | 0.25   | 0.63 |
|                       | Control Group         | 2.60*  | 0.00 |
| Control Group         | Asanas Group          | -2.09* | 0.00 |
|                       | Pranayama Group       | -2.35* | 0.00 |
|                       | Asana Pranayama Group | -2.60* | 0.00 |

Based on estimated marginal means

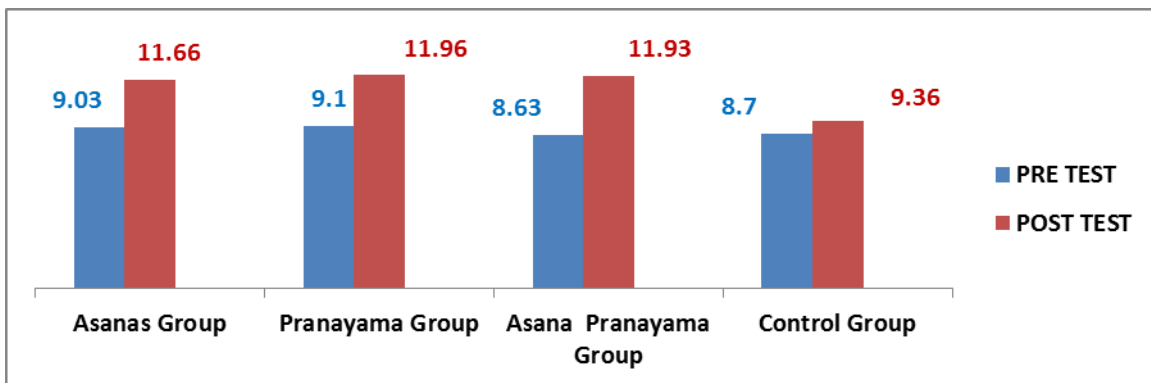
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

\* The mean difference is significant at the 0.05 level.

Table no. 4 indicates the values of post hoc test for the selected Groups for psychological variable of behaviour, which shows that a significant difference was found between the post

test values of Asanas Group and the Control Group as the value was found to be 2.09 which was significant at 0.05 level, the post test values of Pranayama Group and the Control Group as the value was found to be 2.35 which was significant at 0.05 level, Asana Pranayama Group and the Control Group as the value was found to be 2.60 which was significant at 0.05 level (uday, 2010)

**FIGURE:-1**



**COMPARISON OF THE MEANS ON BEHAVIOUR OF THE CONTROL GROUP AND THREE EXPERIMENTAL GROUPS**

**TABLE-5  
DESCRIPTIVE STATISTICS OF THE DATA MEASURED IN THE POST TESTING INTELLECTUAL AND SCHOOL STATUS**

| TREATMENT GROUP       | MEAN  | STD. DEVIATION | N   |
|-----------------------|-------|----------------|-----|
| Asanas Group          | 14.16 | 2.19           | 30  |
| Pranayama Group       | 13.33 | 3.43           | 30  |
| Asana Pranayama Group | 14.16 | 2.56           | 30  |
| Control Group         | 11.76 | 2.78           | 30  |
| Total                 | 13.35 | 2.91           | 120 |

Table no.5 indicates the values of descriptive statistics of the experimental Groups (Asanas Group, Pranayama Group, Asana Pranayama Group) & Control Group for psychological variable of intellectual and school status, which shows that the mean and S.D. values of Asanas Group, Pranayama Group, Asana

Pranayama Group and the Control Group were found to be 14.16±2.19, 13.33±3.43, 14.16±2.56 and 11.76±2.78 respectively. Total the same was 13.35±2.91.

**TABLE-6**  
**DESCRIPTIVE STATISTICS OF THE DATA MEASURED IN THE POST-TESTING AFTER ADJUSTMENT WITH THE INITIAL DIFFERENCE INTELLECTUAL AND SCHOOL STATUS**

| TREATMENT GROUP       | MEAN               | STD. ERROR | 95% CONFIDENCE INTERVAL |             |
|-----------------------|--------------------|------------|-------------------------|-------------|
|                       |                    |            | LOWER BOUND             | UPPER BOUND |
| Asanas Group          | 13.72 <sup>a</sup> | 0.397      | 12.93                   | 14.51       |
| Pranayama Group       | 13.23 <sup>a</sup> | 0.394      | 12.45                   | 14.01       |
| Asana Pranayama Group | 14.44 <sup>a</sup> | 0.395      | 13.66                   | 15.23       |
| Control Group         | 12.02 <sup>a</sup> | 0.395      | 11.24                   | 12.81       |

(a) Covariates appearing in the model are evaluated at the following values: pre intellectual and school status = 11.63

The mean and standard error of different post-testing Groups after adjustment have been shown in table 6. Which is for Asana Group 13.72 & 0.397, Pranayama Group 13.23 & 0.394, Asana Pranayama Group 14.44 & 0.395, and Control Group 12.02 & 0.395.

**TABLE-7**  
**ANCOVA TABLE FOR THE POST-TEST DATA ON INTELLECTUAL AND SCHOOL STATUS**

| SOURCE                             | SUM OF SQUARES | DF  | MEAN SQUARE | F     | SIG. (p-value) |
|------------------------------------|----------------|-----|-------------|-------|----------------|
| Pre intellectual and school status | 384.90         | 1   | 384.90      | 82.64 | 0.00           |
| Treatment Group                    | 93.11          | 3   | 31.03       | 6.66  | 0.00           |
| Error                              | 535.57         | 115 | 4.65        |       |                |
| Corrected Total                    | 1013.59        | 119 |             |       |                |

Table no. 7 indicates the values test of difference between the subject effects, which shows that there was a significant difference in pre test values of psychological variable of intellectual and school status for the four selected Groups, as the value was found to be 82.64, which proves to be the base of

Analysis of Co-Variance. Also, a significant difference was found between the post test values of the experimental and Control Group as the value was found to be 6.66, which was significant at 0.05 level.

**TABLE-8**  
**POST HOC COMPARISON FOR THE GROUP MEANS IN POST-MEASUREMENT ADJUSTED WITH THE INITIAL DIFFERENCES INTELLECTUAL AND SCHOOL STATUS**

| (I) TREATMENT GROUP   | (J) TREATMENT GROUP   | MEAN DIFFERENCE (I-J) | SIG. <sup>a</sup> (p-value) |
|-----------------------|-----------------------|-----------------------|-----------------------------|
| Asanas Group          | Pranayama Group       | 0.49                  | 0.38                        |
|                       | Asana Pranayama Group | -0.72                 | 0.20                        |
|                       | Control Group         | 1.69*                 | 0.003                       |
| Pranayama Group       | Asanas Group          | -0.49                 | 0.38                        |
|                       | Asana Pranayama Group | -1.21*                | 0.03                        |
|                       | Control Group         | 1.20*                 | 0.03                        |
| Asana Pranayama Group | Asana Group           | 0.72                  | 0.20                        |
|                       | Pranayama Group       | 1.21*                 | 0.03                        |
|                       | Control Group         | 2.42*                 | 0.00                        |
| Control Group         | Asana Group           | -1.69*                | 0.003                       |

|  |                 |        |      |
|--|-----------------|--------|------|
|  | Pranayama Group | -1.20* | 0.03 |
|--|-----------------|--------|------|

Based on estimated marginal means

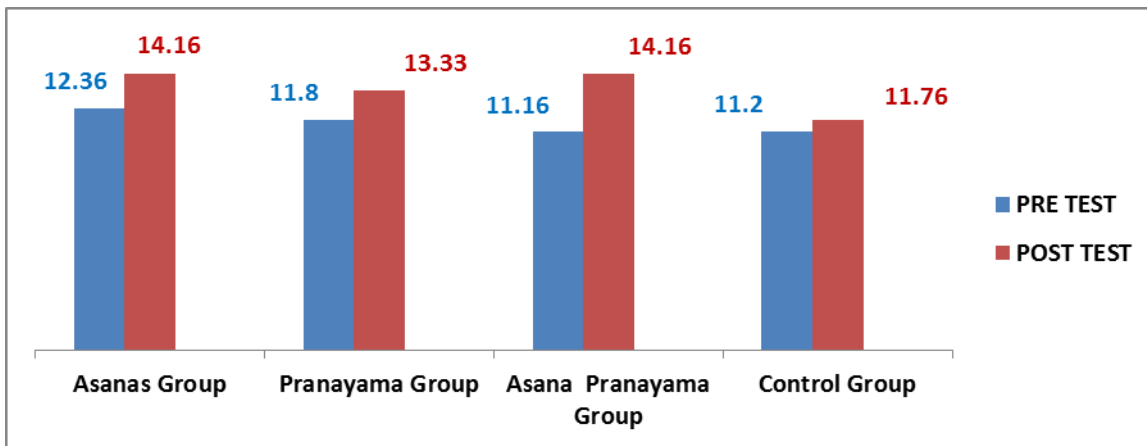
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

\*The mean difference is significant at the 0.05 level.

Table no. 8 indicates the values of post hoc test for the selected Groups for psychological variable of intellectual and school status, which shows that a significant difference was found between the post test values of Asanas Group and the Control Group as the value was found to be 1.69 which was significant at 0.05 level, the post test values of Pranayama Group

and the Control Group as the value was found to be 1.20 which was significant at 0.05 level, Asana Pranayama Group and the Control Group as the value was found to be 2.42 which was significant at 0.05 level and Asana Pranayama Group and the Pranayama Group as the value was found to be 1.21 which was significant at 0.05 level.

**FIGURE:-2**



**COMPARISON OF THE MEANS ON INTELLECTUAL AND SCHOOL STATUS OF THE CONTROL GROUP AND THREE EXPERIMENTAL GROUPS**

**TABLE-9**

**DESCRIPTIVE STATISTICS OF THE DATA MEASURED IN THE POST TESTING PHYSICAL APPEARANCE AND ATTRIBUTES**

| TREATMENT GROUP       | MEAN  | STD. DEVIATION | N   |
|-----------------------|-------|----------------|-----|
| Asanas Group          | 10.60 | 1.30           | 30  |
| Pranayama Group       | 10.56 | 1.38           | 30  |
| Asana Pranayama Group | 10.50 | 1.47           | 30  |
| Control Group         | 8.93  | 1.98           | 30  |
| Total                 | 10.15 | 1.69           | 120 |

Table no.9 indicates the values of descriptive statistics of the experimental Groups (Asanas Group, Pranayama Group, Asana Pranayama Group) & Control Group for psychological variable of physical appearance and attributes, which shows that the mean

and S.D. values of Asanas Group, Pranayama Group, Asana Pranayama Group and the Control Group were found to be 10.60±1.30, 10.56±1.38, 10.50±1.47and 8.93±1.98respectively. Total the same was 10.15±1.69.

**TABLE-10**

**DESCRIPTIVE STATISTICS OF THE DATA MEASURED IN THE POST-TESTING AFTER ADJUSTMENT WITH THE INITIAL DIFFERENCE PHYSICAL APPEARANCE AND ATTRIBUTES**

| TREATMENT GROUP | MEAN | STD. ERROR | 95% CONFIDENCE INTERVAL |       |
|-----------------|------|------------|-------------------------|-------|
|                 |      |            | LOWER                   | UPPER |
|                 |      |            |                         |       |

|                       |                    |      | <b>BOUND</b> | <b>BOUND</b> |
|-----------------------|--------------------|------|--------------|--------------|
| Asanas Group          | 10.66 <sup>a</sup> | 0.24 | 10.17        | 11.15        |
| Pranayama Group       | 10.61 <sup>a</sup> | 0.24 | 10.12        | 11.11        |
| Asana Pranayama Group | 10.49 <sup>a</sup> | 0.24 | 10.00        | 10.98        |
| Control Group         | 8.82 <sup>a</sup>  | 0.25 | 8.32         | 9.31         |

(a)Covariates appearing in the model are evaluated at the following values: physical appearance and attributes pre test = 8.68.

The mean and standard error of different post-testing Groups after adjustment have been shown in table 10. Which is for Asanas Group 10.66 & 0.24, Pranayama Group 10.61 & 0.24, Asana Pranayama Group 10.49 & 0.24 and Control Group 8.82 & 0.25.

**TABLE-11**  
**ANCOVA TABLE FOR THE POST-TEST DATA ON PHYSICAL APPEARANCE AND ATTRIBUTES**

| <b>SOURCE</b>                          | <b>SUM OF SQUARES</b> | <b>DF</b> | <b>MEAN SQUARE</b> | <b>F</b> | <b>SIG. (p-value)</b> |
|--|-----------------------|-----------|--------------------|----------|-----------------------|
| Pre physical appearance and attributes | 57.23                 | 1         | 57.23              | 30.81    | 0.00                  |
| Treatment Group                        | 70.46                 | 3         | 23.48              | 12.64    | 0.00                  |
| Error                                  | 213.60                | 115       | 1.85               |          |                       |
| Corrected Total                        | 341.30                | 119       |                    |          |                       |

Table no. 11 indicates the values test of difference between the subject effects, which shows that there was a significant difference in pre test values of psychological variable of physical appearance and attributes for the four selected Groups, as the value was found to be 30.81, which proves to be the base of

Analysis of Co-Variance. Also, a significant difference was found between the post test values of the experimental and Control Group as the value was found to be 12.64, which was significant at 0.05 level.

**TABLE-12**  
**POST HOC COMPARISON FOR THE GROUP MEANS IN POST-MEASUREMENT ADJUSTED WITH THE INITIAL DIFFERENCES**  
**PHYSICAL APPEARANCE AND ATTRIBUTES**

| <b>(I) TREATMENT GROUP</b> | <b>(J) TREATMENT GROUP</b> | <b>MEAN DIFFERENCE (I-J)</b> | <b>SIG.<sup>a</sup> (p-value)</b> |
|----------------------------|----------------------------|------------------------------|-----------------------------------|
| Asanas Group               | Pranayama Group            | 0.04                         | 0.89                              |
|                            | Asana Pranayama Group      | 0.17                         | 0.63                              |
|                            | Control Group              | 1.84*                        | 0.00                              |
| Pranayama Group            | Asanas Group               | -0.04                        | 0.89                              |
|                            | Asana Pranayama Group      | 0.12                         | 0.72                              |
|                            | Control Group              | 1.79*                        | 0.00                              |
| Asana Pranayama Group      | Asanas Group               | -0.17                        | 0.63                              |
|                            | Pranayama Group            | -0.12                        | 0.72                              |
|                            | Control Group              | 1.67*                        | 0.00                              |
| Control Group              | Asanas Group               | -1.84*                       | 0.00                              |
|                            | Pranayama Group            | -1.79*                       | 0.00                              |
|                            | Asana Pranayama Group      | -1.67*                       | 0.00                              |

Based on estimated marginal means

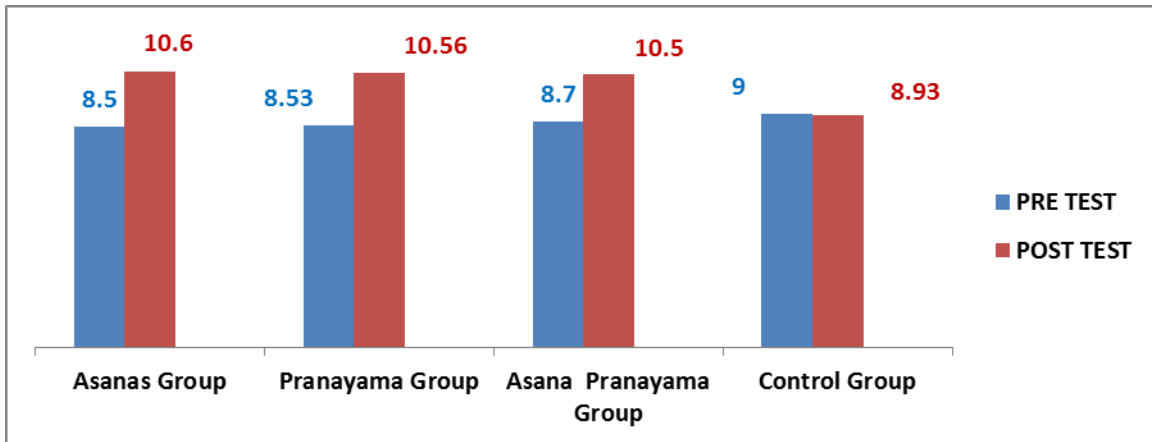
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

\*The mean difference is significant at the 0.05 level.

Table no.12 indicates the values of post hoc test for the selected Groups for psychological variable of physical appearance and attributes, which shows that a significant difference was found between the post test values of Asanas Group and the Control Group as the value was found to be 1.84

which was significant at 0.05 level, the post test values of Pranayama Group and the Control Group as the value was found to be 1.79 which was significant at 0.05 level, Asana Pranayama Group and the Control Group as the value was found to be 1.67 which was significant at 0.05 level.

**FIGURE:-3**



**COMPARISON OF THE MEANS ON PHYSICAL APPEARANCE AND ATTRIBUTES OF THE CONTROL GROUP AND THREE EXPERIMENTAL GROUPS**

**TABLE-13  
DESCRIPTIVE STATISTICS OF THE DATA MEASURED IN THE POST TESTING ANXIETY**

| TREATMENT GROUP       | MEAN | STD. DEVIATION | N   |
|-----------------------|------|----------------|-----|
| Asanas Group          | 5.73 | 1.77           | 30  |
| Pranayama Group       | 5.80 | 2.02           | 30  |
| Asana Pranayama Group | 5.00 | 1.76           | 30  |
| Control Group         | 7.66 | 2.89           | 30  |
| Total                 | 6.05 | 2.35           | 120 |

Table no.13 indicates the values of descriptive statistics of the experimental Groups (Asanas Group, Pranayama Group, Asana Pranayama Group) & Control Group for psychological variable of anxiety, which shows that the mean and S.D. values of Asanas Group, Pranayama Group, Asana Pranayama Group and the Control Group were found to be 5.73±1.77, 5.80±2.02, 5.00±1.76 and 7.66±2.89 respectively. Total the same was 6.05±2.35.

**TABLE-14  
DESCRIPTIVE STATISTICS OF THE DATA MEASURED IN THE POST-TESTING AFTER ADJUSTMENT WITH THE INITIAL DIFFERENCE ANXIETY**

| TREATMENT GROUP       | MEAN              | STD. ERROR | 95% CONFIDENCE INTERVAL |             |
|-----------------------|-------------------|------------|-------------------------|-------------|
|                       |                   |            | LOWER BOUND             | UPPER BOUND |
| Asanas Group          | 5.68 <sup>a</sup> | 0.26       | 5.15                    | 6.20        |
| Pranayama Group       | 5.61 <sup>a</sup> | 0.26       | 5.08                    | 6.13        |
| Asana Pranayama Group | 5.16 <sup>a</sup> | 0.26       | 4.63                    | 5.68        |
| Control Group         | 7.75 <sup>a</sup> | 0.26       | 7.22                    | 8.27        |

(a) Covariates appearing in the model are evaluated at the following values: general anxiety scale for children pre test = 7.54.

The mean and standard error of different post-testing Groups after adjustment have been shown in table 14. Which is for

Asanas Group 5.68 & .26, Pranayama Group 5.61 & 0.26, Asana Pranayama Group 5.16 & 0.26 and Control Group 7.75 & 0.26.



**TABLE-15**  
**ANCOVA TABLE FOR THE POST-TEST DATA ON ANXIETY**

| SOURCE                         | SUM OF SQUARES | DF  | MEAN SQUARE | F      | SIG. (p-value) |
|--------------------------------|----------------|-----|-------------|--------|----------------|
| Pre Anxiety Scale For Children | 298.94         | 1   | 298.94      | 142.95 | 0.00           |
| Treatment Group                | 120.26         | 3   | 40.09       | 19.17  | 0.00           |
| Error                          | 240.48         | 115 | 2.09        |        |                |
| Corrected Total                | 659.70         | 119 |             |        |                |

Table no.15 indicates the values test of difference between the subject effects, which shows that there was a significant difference in pre test values of psychological variable of anxiety for the four selected Groups, as the value was found to be

142.95, which proves to be the base of Analysis of Co-Variance. Also, a significant difference was found between the post test values of the experimental and Control Group as the value was found to be 19.17, which was significant at 0.05 level.

**TABLE-16**  
**POST HOC COMPARISON FOR THE GROUP MEANS IN POST-MEASUREMENT ADJUSTED WITH THE INITIAL DIFFERENCES ANXIETY**

| (I) TREATMENT GROUP   | (J) TREATMENT GROUP   | MEAN DIFFERENCE (I-J) | SIG. <sup>a</sup> (p-value) |
|-----------------------|-----------------------|-----------------------|-----------------------------|
| Asanas Group          | Pranayama Group       | 0.07                  | 0.85                        |
|                       | Asana Pranayama Group | 0.51                  | 0.16                        |
|                       | Control Group         | -2.07*                | 0.00                        |
| Pranayama Group       | Asanas Group          | -0.07                 | 0.85                        |
|                       | Asana Pranayama Group | 0.44                  | 0.23                        |
|                       | Control Group         | -2.14*                | 0.00                        |
| Asana Pranayama Group | Asanas Group          | -0.51                 | 0.16                        |
|                       | Pranayama Group       | -0.44                 | 0.23                        |
|                       | Control Group         | -2.58*                | 0.00                        |
| Control Group         | Asanas Group          | 2.07*                 | 0.00                        |
|                       | Pranayama Group       | 2.14*                 | 0.00                        |
|                       | Asana Pranayama Group | 2.58*                 | 0.00                        |

Based on estimated marginal means

a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

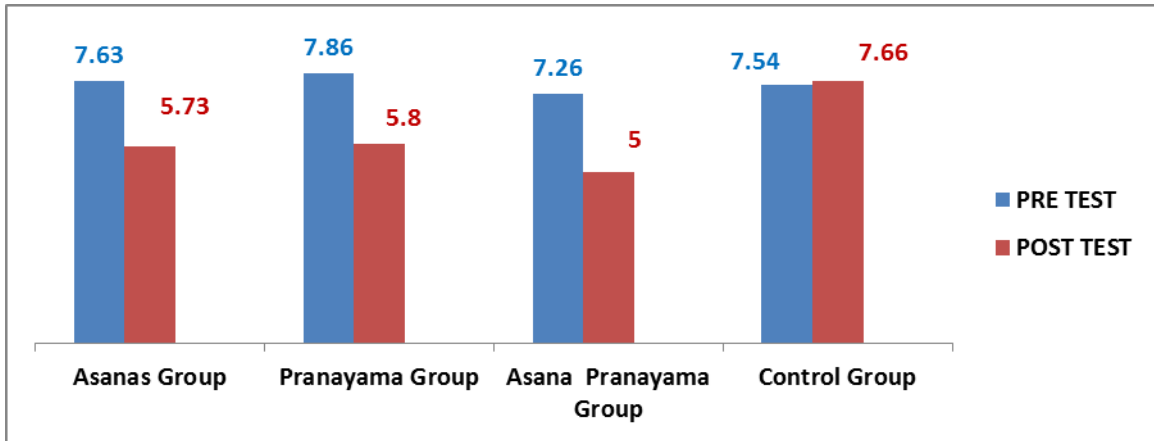
\*The mean difference is significant at the 0.05 level.

Table no. 16 indicates the values of post hoc test for the selected Groups for psychological variable of anxiety, which shows that a significant difference was found between the post test values of Asanas Group and the Control Group as the value was found to be 2.07 which was significant at 0.05 level, the post

test values of Pranayama Group and the Control Group as the value was found to be 2.14 which was significant at 0.05 level, Asana Pranayama Group and the Control Group as the value was found to be 2.58 which was significant at 0.05 level.



**FIGURE:-4**



**COMPARISON OF THE MEANS ON ANXIETY OF THE CONTROL GROUP AND THREE EXPERIMENTAL GROUPS**

**TABLE-17**  
**DESCRIPTIVE STATISTICS OF THE DATA MEASURED IN THE POST TESTING POPULARITY**

| TREATMENT GROUP       | MEAN | STD. DEVIATION | N   |
|-----------------------|------|----------------|-----|
| AsanaGroup            | 9.16 | 2.15           | 30  |
| Pranayama Group       | 9.20 | 1.98           | 30  |
| Asana Pranayama Group | 9.70 | 1.91           | 30  |
| Control Group         | 6.26 | 2.28           | 30  |
| Total                 | 8.58 | 2.47           | 120 |

Table no.17 indicates the values of descriptive statistics of the experimental Groups (Asanas Group, Pranayama Group, Asana Pranayama Group) & Control Group for psychological variable of popularity, which shows that the mean and S.D.

values of Asanas Group, Pranayama Group, Asana Pranayama Group and the Control Group were found to be  $9.16 \pm 2.15$ ,  $9.20 \pm 1.98$ ,  $9.70 \pm 1.91$  and  $6.26 \pm 2.28$  respectively. Total the same was  $8.58 \pm 2.47$ .

**TABLE-18**  
**DESCRIPTIVE STATISTICS OF THE DATA MEASURED IN THE POST-TESTING AFTER ADJUSTMENT WITH THE INITIAL DIFFERENCE POPULARITY**

| TREATMENT GROUP       | MEAN              | STD. ERROR | 95% CONFIDENCE INTERVAL |             |
|-----------------------|-------------------|------------|-------------------------|-------------|
|                       |                   |            | LOWER BOUND             | UPPER BOUND |
| AsanaGroup            | 9.00 <sup>a</sup> | 0.270      | 8.46                    | 9.53        |
| Pranayama Group       | 9.21 <sup>a</sup> | 0.270      | 8.68                    | 9.74        |
| Asana Pranayama Group | 9.55 <sup>a</sup> | 0.270      | 9.02                    | 10.09       |
| Control Group         | 6.55 <sup>a</sup> | 0.271      | 6.02                    | 7.09        |

(a) Covariates appearing in the model are evaluated at the following values: popularity pre test = 6.95.

The mean and standard error of different post-testing Groups after adjustment have been shown in table 18. Which is for Asanas Group 9.00 & 0.270, Pranayama Group 9.21 & 0.270,

Asana Pranayama Group 9.55 & 0.270 and Control Group 6.55 & 0.271.

**TABLE-19**  
**ANCOVA TABLE FOR THE POST-TEST DATA ON POPULARITY**

| SOURCE          | SUM OF SQUARES | DF  | MEAN SQUARE | F      | SIG. (p-value) |
|-----------------|----------------|-----|-------------|--------|----------------|
| Pre popularity  | 309.54         | 1   | 309.54      | 141.70 | 0.00           |
| Treatment Group | 166.41         | 3   | 55.47       | 25.39  | 0.00           |
| Error           | 251.21         | 115 | 2.18        |        |                |
| Corrected Total | 727.16         | 119 |             |        |                |

Table no.19 indicates the values test of difference between the subject effects, which shows that there was a significant difference in pre test values of psychological variable of popularity for the four selected Groups, as the value was found to

be 141.70, which proves to be the base of Analysis of Co-Variance. Also, a significant difference was found between the post test values of the experimental and Control Group as the value was found to be 25.39, which was significant at 0.05 level.

**TABLE-20**  
**POST HOC COMPARISON FOR THE GROUP MEANS IN POST-MEASUREMENT ADJUSTED WITH THE INITIAL DIFFERENCES POPULARITY**

| (I) TREATMENT GROUP  | (J) TREATMENT GROUP   | MEAN DIFFERENCE (I-J) | SIG. <sup>a</sup> (p-value) |
|----------------------|-----------------------|-----------------------|-----------------------------|
| AsanaGroup           | Pranayama Group       | -0.21                 | 0.58                        |
|                      | AsanaPranayama Group  | -0.55                 | 0.15                        |
|                      | Control Group         | 2.44*                 | 0.00                        |
| Pranayama Group      | AsanaGroup            | 0.21                  | 0.58                        |
|                      | Asana Pranayama Group | -0.34                 | 0.37                        |
|                      | Control Group         | 2.65*                 | 0.00                        |
| AsanaPranayama Group | AsanaGroup            | 0.55                  | 0.15                        |
|                      | Pranayama Group       | 0.34                  | 0.37                        |
|                      | Control Group         | 2.99*                 | 0.00                        |
| Control Group        | AsanaGroup            | -2.44*                | 0.00                        |
|                      | Pranayama Group       | -2.65*                | 0.00                        |
|                      | Asana Pranayama Group | -2.99*                | 0.00                        |

Based on estimated marginal means

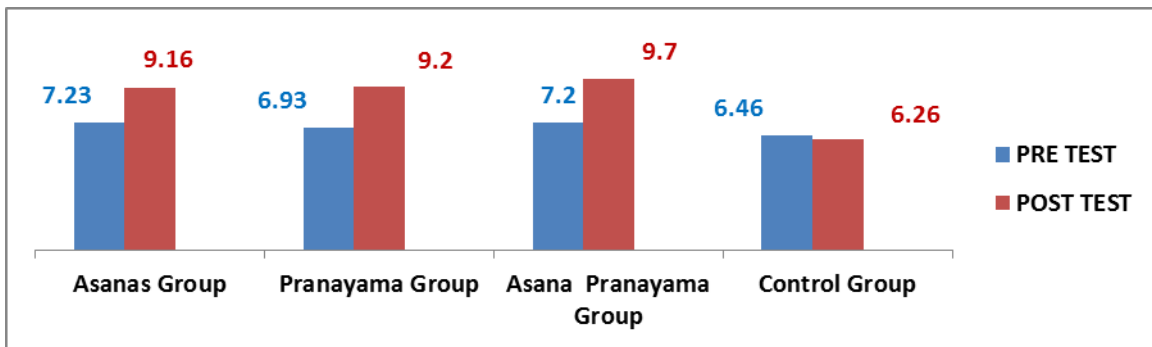
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

\* The mean difference is significant at the 0.05 level.

Table no.20 indicates the values of post hoc test for the selected Groups for psychological variable of popularity, which shows that a significant difference was found between the post test values of Asanas Group and the Control Group as the value was found to be 2.44 which was significant at 0.05 level, the post

test values of Pranayama Group and the Control Group as the value was found to be 2.65 which was significant at 0.05 level, Asana Pranayama Group and the Control Group as the value was found to be 2.99 which was significant at 0.05 level.

**FIGURE:-5**



**COMPARISON OF THE MEANS ON POPULARITY OF THE CONTROL GROUP AND THREE EXPERIMENTAL GROUPS**

**TABLE-21  
DESCRIPTIVE STATISTICS OF THE DATA MEASURED IN THE POST TESTING HAPPINESS AND SATISFACTION**

| TREATMENT GROUP       | MEAN | STD. DEVIATION | N   |
|-----------------------|------|----------------|-----|
| AsanaGroup            | 7.93 | 1.41           | 30  |
| Pranayama Group       | 8.00 | 1.43           | 30  |
| Asana Pranayama Group | 7.86 | 1.52           | 30  |
| Control Group         | 6.00 | 1.41           | 30  |
| Total                 | 7.45 | 1.65           | 120 |

Table no.21 indicates the values of descriptive statistics of the experimental Groups (Asanas Group, Pranayama Group, Asana Pranayama Group) & Control Group for psychological variable of happiness and satisfaction, which shows that the mean and S.D. values of Asanas Group, Pranayama Group, Asana Pranayama Group and the Control Group were found to be 7.93±1.41, 8.00±1.43, 7.86±1.52 and 6.00±1.41 respectively. Total the same was 7.45±1.65.

**TABLE-22  
DESCRIPTIVE STATISTICS OF THE DATA MEASURED IN THE POST-TESTING AFTER ADJUSTMENT WITH THE INITIAL DIFFERENCE HAPPINESS AND SATISFACTION**

| TREATMENT GROUP       | MEAN              | STD. ERROR | 95% CONFIDENCE INTERVAL |             |
|-----------------------|-------------------|------------|-------------------------|-------------|
|                       |                   |            | LOWER BOUND             | UPPER BOUND |
| Asanas Group          | 7.95 <sup>a</sup> | 0.22       | 7.50                    | 8.40        |
| Pranayama Group       | 8.05 <sup>a</sup> | 0.22       | 7.60                    | 8.50        |
| Asana Pranayama Group | 7.86 <sup>a</sup> | 0.22       | 7.41                    | 8.31        |
| Control Group         | 5.92 <sup>a</sup> | 0.22       | 5.47                    | 6.37        |

(a)Covariates appearing in the model are evaluated at the following values: happiness and satisfaction pre test = 6.22.

The mean and standard error of different post-testing Groups after adjustment have been shown in table 22. Which is for Asanas Group 7.95 & 0.22, Pranayama Group 8.05 & 0.22, Asana Pranayama Group 7.86 & 0.22 and Control Group 5.92 & 0.22.

**TABLE-23  
ANCOVA TABLE FOR THE POST-TEST DATA ON HAPPINESS AND SATISFACTION**

| SOURCE | SUM OF SQUARES | DF | MEAN SQUARE | F | SIG. (p- |
|--------|----------------|----|-------------|---|----------|
|--------|----------------|----|-------------|---|----------|

|                                |        |     |       |       |               |
|--------------------------------|--------|-----|-------|-------|---------------|
|                                |        |     |       |       | <b>value)</b> |
| Pre happiness and satisfaction | 55.91  | 1   | 55.91 | 35.98 | 0.00          |
| Treatment Group                | 93.08  | 3   | 31.02 | 19.96 | 0.00          |
| Error                          | 178.69 | 115 | 1.55  |       |               |
| Corrected Total                | 327.70 | 119 |       |       |               |

Table no. 23 indicates the values test of difference between the subject effects, which shows that there was a significant difference in pre test values of psychological variable of happiness and satisfaction for the four selected Groups, as the value was found to be 35.98, which proves to be the base of

Analysis of Co-Variance. Also, a significant difference was found between the post test values of the experimental and Control Group as the value was found to be 19.96, which was significant at 0.05 level.

**TABLE-24**  
**POST HOC COMPARISON FOR THE GROUP MEANS IN POST-MEASUREMENT ADJUSTED WITH THE INITIAL DIFFERENCES**  
**HAPPINESS AND SATISFACTION**

| <b>(I) TREATMENT GROUP</b> | <b>(J) TREATMENT GROUP</b> | <b>MEAN DIFFERENCE (I-J)</b> | <b>SIG.<sup>a</sup> (p-value)</b> |
|----------------------------|----------------------------|------------------------------|-----------------------------------|
| Asanas Group               | Pranayama Group            | -0.09                        | 0.76                              |
|                            | Asana Pranayama Group      | 0.09                         | 0.76                              |
|                            | Control Group              | 2.03*                        | 0.00                              |
| Pranayama Group            | Asanas Group               | 0.09                         | 0.76                              |
|                            | Asana Pranayama Group      | 0.19                         | 0.55                              |
|                            | Control Group              | 2.12*                        | 0.00                              |
| Asana Pranayama Group      | Asanas Group               | -0.09                        | 0.76                              |
|                            | Pranayama Group            | -0.19                        | 0.55                              |
|                            | Control Group              | 1.93*                        | 0.00                              |
| Control Group              | Asanas Group               | -2.03*                       | 0.00                              |
|                            | Pranayama Group            | -2.12*                       | 0.00                              |
|                            | Asana Pranayama Group      | -1.93*                       | 0.00                              |

Based on estimated marginal means

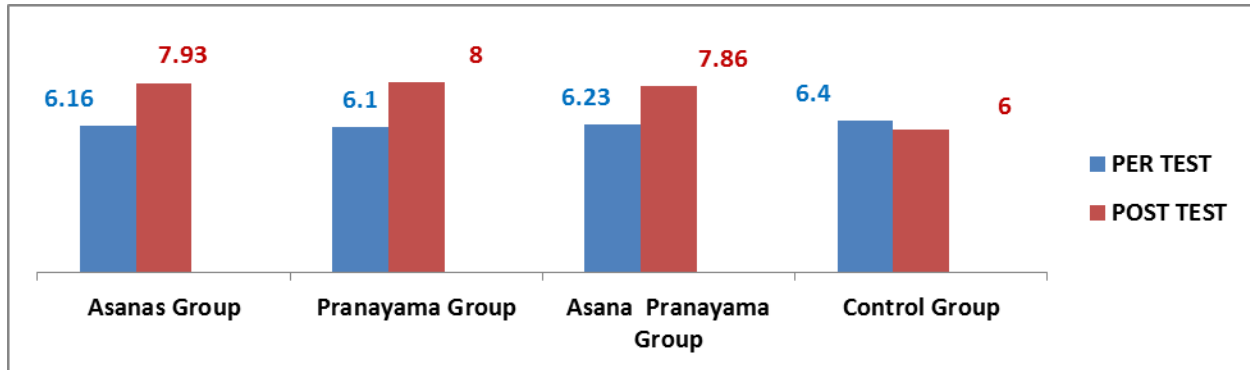
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

\*The mean difference is significant at the 0.05 level.

Table no. 24 indicates the values of post hoc test for the selected Groups for psychological variable of happiness and satisfaction, which shows that a significant difference was found between the post test values of Asanas Group and the Control Group as the value was found to be 2.03 which was significant at

0.05 level, the post test values of Pranayama Group and the Control Group as the value was found to be 2.12 which was significant at 0.05 level, Asana Pranayama Group and the Control Group as the value was found to be 1.93 which was significant at 0.05 level.

**FIGURE:-6**



**COMPARISON OF THE MEANS ON HAPPINESS AND SATISFACTION OF THE CONTROL GROUP AND THREE EXPERIMENTAL GROUPS**

**TABLE-25**  
**DESCRIPTIVE STATISTICS OF THE DATA MEASURED IN THE POST TESTING SELF CONCEPT**

| TREATMENT GROUP       | MEAN  | STD. DEVIATION | N   |
|-----------------------|-------|----------------|-----|
| Asanas Group          | 59.26 | 5.53           | 30  |
| Pranayama Group       | 58.86 | 6.32           | 30  |
| Asana Pranayama Group | 59.16 | 5.66           | 30  |
| Control Group         | 50.00 | 7.31           | 30  |
| Total                 | 56.82 | 7.33           | 120 |

Table no.25 indicates the values of descriptive statistics of the experimental Groups (Asanas Group, Pranayama Group, Asana Pranayama Group) & Control Group for psychological variable of self concept, which shows that the mean and S.D. values of Asanas Group, Pranayama Group, Asana Pranayama Group and the Control Group were found to be  $59.26 \pm 5.53$ ,  $58.86 \pm 6.32$ ,  $59.16 \pm 5.66$  and  $50.00 \pm 7.31$  respectively. Total the same was  $56.82 \pm 7.33$ .

**TABLE-26**  
**DESCRIPTIVE STATISTICS OF THE DATA MEASURED IN THE POST-TESTING AFTER ADJUSTMENT WITH THE INITIAL DIFFERENCE SELF CONCEPT**

| TREATMENT GROUP       | MEAN               | STD. ERROR | 95% CONFIDENCE INTERVAL |             |
|-----------------------|--------------------|------------|-------------------------|-------------|
|                       |                    |            | LOWER BOUND             | UPPER BOUND |
| Asanas Group          | 58.69 <sup>a</sup> | 0.761      | 57.19                   | 60.20       |
| Pranayama Group       | 58.63 <sup>a</sup> | 0.760      | 57.12                   | 60.13       |
| Asana Pranayama Group | 59.55 <sup>a</sup> | 0.760      | 58.05                   | 61.06       |
| Control Group         | 50.41 <sup>a</sup> | 0.760      | 48.90                   | 51.91       |

(a)Covariates appearing in the model are evaluated at the following values: self concept pre test = 49.90.

The mean and standard error of different post-testing Groups after adjustment have been shown in table 26. Which is for Asanas Group 58.69 & 0.761, Pranayama Group 58.63 & 0.760, Asana Pranayama Group 59.55 & 0.760 and Control Group 50.41 & 0.760.

**TABLE-27**  
**ANCOVA TABLE FOR THE POST-TEST DATA ON**  
**SELF CONCEPT**

| <b>SOURCE</b>    | <b>SUM OF SQUARES</b> | <b>DF</b> | <b>MEAN SQUARE</b> | <b>F</b> | <b>SIG. (p-value)</b> |
|------------------|-----------------------|-----------|--------------------|----------|-----------------------|
| Pre self concept | 2749.35               | 1         | 2749.35            | 158.92   | 0.00                  |
| Treatment Group  | 1658.47               | 3         | 552.82             | 31.95    | 0.00                  |
| Error            | 1989.49               | 115       | 17.30              |          |                       |
| Corrected Total  | 6397.32               | 119       |                    |          |                       |

Table no. 27 indicates the values test of difference between the subject effects, which shows that there was a significant difference in pre test values of psychological variable of self concept for the four selected Groups, as the value was found to

be 158.92, which proves to be the base of Analysis of Co-Variance. Also, a significant difference was found between the post test values of the experimental and Control Group as the value was found to be 31.95, which was significant at 0.05 level.

**TABLE-28**  
**POST HOC COMPARISON FOR THE GROUP MEANS IN POST-MEASUREMENT ADJUSTED WITH THE INITIAL DIFFERENCES**  
**SELF CONCEPT**

| <b>(I) TREATMENT GROUP</b> | <b>(J) TREATMENT GROUP</b> | <b>MEAN DIFFERENCE (I-J)</b> | <b>SIG.<sup>a</sup> (p-value)</b> |
|----------------------------|----------------------------|------------------------------|-----------------------------------|
| Asanas Group               | Pranayama Group            | 0.06                         | 0.95                              |
|                            | Asana Pranayama Group      | -0.86                        | 0.42                              |
|                            | Control Group              | 8.28*                        | 0.00                              |
| Pranayama Group            | Asanas Group               | -0.06                        | 0.95                              |
|                            | Asana Pranayama Group      | -0.92                        | 0.39                              |
|                            | Control Group              | 8.22*                        | 0.00                              |
| Asana Pranayama Group      | Asanas Group               | 0.86                         | 0.42                              |
|                            | Pranayama Group            | 0.92                         | 0.39                              |
|                            | Control Group              | 9.14*                        | 0.00                              |
| Control Group              | Asanas Group               | -8.28*                       | 0.00                              |
|                            | Pranayama Group            | -8.22*                       | 0.00                              |
|                            | Asana Pranayama Group      | -9.14*                       | 0.00                              |

Based on estimated marginal means

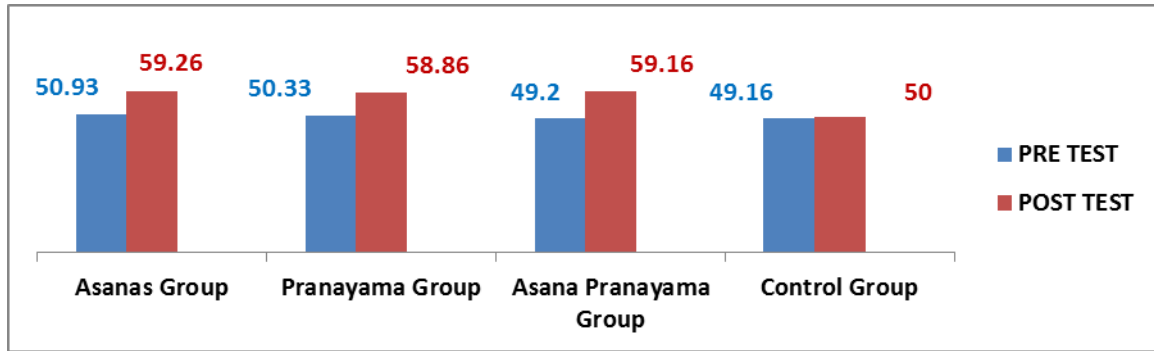
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

\* The mean difference is significant at the 0.05 level.

Table no. 28 indicates the values of post hoc test for the selected Groups for psychological variable of self concept, which shows that a significant difference was found between the post test values of Asanas Group and the Control Group as the value was found to be 8.28 which was significant at 0.05 level, the post

test values of Pranayama Group and the Control Group as the value was found to be 8.22 which was significant at 0.05 level, Asana Pranayama Group and the Control Group as the value was found to be 9.14 which was significant at 0.05 level.

FIGURE:-7



### COMPARISON OF THE MEANS ON SELF CONCEPT OF THE CONTROL GROUP AND THREE EXPERIMENTAL GROUPS

## VIII. DISCUSSION

### BEHAVIOUR

Table 3 was referred back into the result section. It could be seen from the table that there was a significant difference in case of behaviour after administrating the different training programme namely Asana, Pranayama and combination of Asana Pranayama.

The post hoc test (Table 4) revealed that behaviour was significantly improved in Asana Pranayama among the three experimental programme followed by Pranayama programme and Asanas programme Groups.

The effectiveness of combination of Asana Pranayama programme in comparison to other training programme may be due to the reason that both Asana Pranayama programme increase the level of behaviour. Therefore, proposed hypothesis has been accepted in case of behaviour.

### INTELLECTUAL AND SCHOOL STATUS

Table 7 was referred back into the result section. It could be seen from the table that there was a significant difference in case of intellectual and school status after administrating the different training programme namely Asana, Pranayama and combination of Asana Pranayama.

The post hoc test (Table 8) revealed that intellectual and school status was significantly improved in Asana Pranayama among the three experimental programme followed by Asanas programme and Pranayama programme Groups.

The effectiveness of combination of Asana Pranayama programme in comparison to other training programme may be due to the reason that both Asana Pranayama programme increase the level of intellectual and school status. Therefore, proposed hypothesis has been accepted in case of intellectual and school status.

### PHYSICAL APPEARANCE AND ATTRIBUTES

Table 11 was referred back into the result section. It could be seen from the table that there was a significant difference in case of physical appearance and attributes after administrating the different training programme namely Asana, Pranayama and combination of Asana Pranayama.

The post hoc test (Table 12) revealed that physical appearance and attributes was significantly improved in Asanas among the three experimental programme followed by Pranayama programme and Asana Pranayama programme Groups.

The effectiveness of Asanas programme in comparison to other training programme may be due to the reason that Asanas programme increase physical appearance and attributes. Therefore, proposed hypothesis has been accepted in case of physical appearance and attributes.

### ANXIETY

Table 15 was referred back into the result section. It could be seen from the table that there was a significant difference in case of anxiety after administrating the different training programme namely Asana, Pranayama and combination of Asana Pranayama.

The post hoc test (Table 16) revealed that anxiety was significantly improved in Asana Pranayama among the three experimental programme followed by Pranayama programme and Asanas programme Groups.

The effectiveness of combination of Asana Pranayama programme in comparison to other training programme may be due to the reason that both Asana Pranayama programme decrease the level of anxiety of individuals. Therefore, proposed hypothesis has been accepted in case of anxiety.

### POPULARITY

Table 19 was referred back into the result section. It could be seen from the table that there was a significant difference in case of popularity after administrating the different training programme namely Asana, Pranayama and combination of Asana Pranayama.

The post hoc test (Table 20) revealed that popularity was significantly improved in Asana Pranayama among the three experimental programme followed by Pranayama programme and Asanas programme Groups.

The effectiveness of combination of Asana Pranayama programme in comparison to other training programme may be due to the reason that both Asana Pranayama programme



increase popularity. Therefore, proposed hypothesis has been accepted in case of popularity.

### HAPPINESS AND SATISFACTION

Table 23 was referred back into the result section. It could be seen from the table that there was a significant difference in case of happiness and satisfaction after administrating the different training programme namely Asana, Pranayama and combination of Asana Pranayama.

The post hoc test (Table 24) revealed that happiness and satisfaction was significantly improved in Pranayama among the three experimental programme followed by Asanas programme and Asana Pranayama programme Groups.

The effectiveness of Pranayama programme in comparison to other training programme may be due to the reason that Pranayama programme increase happiness and satisfaction. Therefore, proposed hypothesis has been accepted in case of happiness and satisfaction.

### SELF CONCEPT

Table 27 was referred back into the result section. It could be seen from the table that there was a significant difference in case of self concept after administrating the different training programme namely Asana, Pranayama and combination of Asana Pranayama.

The post hoc test (Table 28) revealed that self concept was significantly improved in Asana Pranayama among the three experimental programme followed by Pranayama programme and Asanas programme Groups.

The effectiveness of combination of Asana Pranayama programme in comparison to other training programme may be due to the reason that both Asana Pranayama programme increase self awareness of an individual regarding self and others. Therefore, proposed hypothesis has been accepted in case of self concept.

### IX. CONCLUSIONS

1. Asanas, Pranayama and combination of Asana Pranayama also improve the Behaviour of school going children.
2. Asanas, Pranayama and combination of Asana Pranayama also improve the Intellectual and school status of school going children.
3. Asanas, Pranayama and combination of Asana Pranayama also improve the Physical appearance and attributes of school going children.
4. Asanas, Pranayama and combination of Asana Pranayama also improve the Anxiety of school going children.
5. Asanas, Pranayama and combination of Asana Pranayama also improve the Popularity of school going children.
6. Asanas, Pranayama and combination of Asana Pranayama also improve the Happiness and satisfaction of school going children.
7. Asanas, Pranayama and combination of Asana Pranayama also improve the self concept of school going children.

### X. RECOMMENDATIONS

It will be appreciated if following studies may be executed in future for upliftment of human beings like

- ❖ Sportsmen from different games and sports.
- ❖ Boys of different age groups (Childhood, College going).
- ❖ Girls of different groups (Childhood, Adolescent & College going).
- ❖ Working and non working males and females from different work of life's.
- ❖ Senior Citizens male and female .
- ❖ It is further noted that the same research may be conducted on larger population of different age groups and genders.

### REFERENCES

- [1] Alvarez, J. A. (1993) A study of high school students perceptions of school stress, coping resources and stress responses. Unpublished Doctoral Thesis, Dissertation Abstracts International, Vol. 55(3), 468.
- [2] Archer, J. & Lamin, A. (1985) An investigation of personal and academic stressors on college campuses, *Journal of College Student Personnel*. Vol. 26(3), 210-215.
- [3] Asha, C.B. (2003) Creativity, Intelligence, Academic Stress And Mental Health. *Journal of Community Guidance and Research*, Vol. 20 (1), 41-47.
- [4] Bisht, A.R (1980) Interactive effect of school climate and need for academic achievement on The Academic Stress of Students. Education, Almora Constituent College, Kumon University.
- [5] Bisht, A. R. (1987) Bisht battery of stress scales. National Psychological Corporation Agra. Chauhan S.S (1978) *Advanced Educational Psychology*, Vikash Publication Pvt. Ltd.
- [6] Dewan (2003) *Journal of Educational Research and Extension*. Vol. 41(3), July-Sep. (2004)
- [7] Flocco, D. C. (2005) School schedules and how they impact student perceptions of stress. Unpublished Doctoral Thesis, Dissertation Abstracts International, June Vol. 65 (12), 4411.
- [8] Graver et.al (1988) Role of Yoga in the treatment of Psychoneurosis, *PGI Psychiatry*, 29 253 -258.
- [9] Kochar, H.C (1972) Yoga practice as a variable in neuroticism, anxiety and hostility, *Yoga*
- [10] *Mimansa*, 15, 37-46.
- [11]
- [12] Kochar, H.C (1976) Influence of Yogic Practices on mental Fatigue. *Yoga-Mimansa* Vol. 28 (2), 3.
- [13] Kochar, H.C (1976-77) Effect of yogic practices on immediate memory, *Yoga Mimansa* 18, 57-
- [14] 61.
- [15] Kumari, Santosh et.al (2005) Impact of Yogic Shatkriyas and Pranayamas on stress of senior secondary student, *Yoga Mimansa*, Vol. 37, No. 1 & 2., 23-30.
- [17] Mangal, S.K (2002) *Advanced Educational Psychology*, Prentice Hall of India Private Lim.
- [18] Pratap, V. (1971) Investigation on Trataka, collected papers on yoga, Lonavala, Kaivalyadhama, 16.
- [19] Tirth, Omanand (1960) *Patanjal Yog Paradeep*, Geeta Press Gorkhpur. Sahu, R.J & Bhole, M.V. (1983) Effect of three week Yogic training programme on psychomotor performance, *Yoga Mimansa*, 22, 59-62.

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