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## Effect of yogic practices on trait anxiety among secondary school students

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### Abstract

Yoga is a way to harmonious development of mankind that is physical, mental, intellectual, emotional and spiritual aspect of life. The study was conducted on 80 secondary school students. On the variable trait anxiety, subjects belonging to experimental groups i.e. Asana, Pranayama and Dhyana group differed significantly than the control group. Trait anxiety indicating positive effect of selected yogic practices (Asana, Pranayama and Dhyana).

**Keywords:** Asana, Pranayama and Dhyana

### Introduction

Yoga is a way to harmonious development of mankind that is physical, mental, intellectual, emotional and spiritual aspect of life. The development of a family, a society, a nation and the world depends upon the development of an individual. Individual is the foundation stone of the society. The concept of yoga is that each seed has an inherent capacity gifted by the nature to grow in shape of a big tree. The process of growing into a big tree, laden with flowers and fruits, needs proper soil, irrigation, sunlight, heat and other support. Likewise human beings right from childhood to the old age, need proper diet, education and other facilities in order to become a healthy person and the process of yoga is meant for the total development of an individual. It is clear that the creator of this trinity has made every material and living organism with a definite purpose in order to make the creation well managed and balanced. The human body gets enormous energy and strength. With the help of yogic treatment it gets enlightened about its potential and can make best use of power lying within. Human life is a precious gift of nature, which is not meant for purposeless stress and frustration. Therefore, one should understand responsibilities towards body to make it healthy and worthy for ourselves and for the society at large. The growing children of our society are very vulnerable to this haphazard living style prevalent in our society; therefore, it is very important and essential to impart yogic education to our children.

Trait anxiety is a relatively stable individual difference in anxiety proneness. (Raj Bala 1994). Trait anxiety is defined by Spielberger as the relatively stable individual differences in anxiety proneness, that is tendency to respond to situations perceived as threatening with elevations in a state intensity (Saini, Namita 1993).

### Objective of the study

To assess the effect of Yogic practices on trait anxiety among secondary school children.

### Hypothesis

There is significant effect of yogic practices on trait anxiety among senior secondary school children

### Psychological variable:

i. Trait anxiety scale (TAS)

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**Methodology**

**Sample:** The present study was conducted on male subjects of 16 to 19 years of age, studying in XI and XII grades in Government Senior Secondary School, Sector 23, Chandigarh. To ensure the selection of subject having normally sound mind in sound body, the investigator checked the health records maintained by the school with the help of a small team of physical instructors and eliminated (20) subjects finally selecting (80) students. Further the selected subjects were assigned the following four (4) groups.

1. Experimental Group I (Asana)
2. Experimental Group II (Pranayama)
3. Experimental Group III (Dhyana)
4. Control Group

Due emphasis was laid on aspects like age, height, weight, past game / sports experience / participation and health records before allocating the groups to ensure homogeneity. Prior to the administration of pre-test; a meeting of all the selected subjects were held in which the principal and the teachers of physical education of the said school were present. The purpose of the study along with various testing procedures and training program were explained to them in detail. Later on the selected subjects were also explained the same so that, they could grasp the importance and should suffer from no confusion whatsoever regarding the hard work and interest they would have to put in. All the subjects agreed to co-operate whole heartedly.

**Experimental design:** A simple random group design was adopted for this study as it seemed to be the most appropriate one. The eighty (80) subjects were classified into four equal groups with twenty (20) subjects in each group. Three experimental groups (Asana, Pranayama, Dhyana) and fourth as a control group.

**Training design:** The training lasted twelve weeks. There were three sessions of one hour for each group in a week. Time was controlled for each group and the sessions commenced at 7.00 A. M. sharp. The training design was broadly classified as follows.

**1. Experimental Group I (Asana):** Following exercises short listed & administered on experimental group-I :

- Surya Namaskara
- Paschimotianasana
- Sarvangasana
- Halasana
- Pavan Muktasana
- Uthit Padmasana
- Shavasana

**2. Experimental Group II (Prayanama):** Following was practiced by experimental group-II

- Surya Bhedana
- Kapalbhati
- Sitali
- Sitakari

**3. Experimental Group III (Dhyana):** Following was administered to Experimental Group III.

- Dot Trataka
- Candle Trataka

**Statistical Analysis**

To find out the significance of the differences among the groups as a result of training, the analysis of covariance (ANCOVA) was applied since the study employed the random group design and the four groups were not equal with reference to the factors examined through the analysis of covariance, the final means and the adjusted final means were listed for significance. In the case of variables where the F-ratio (ANCOVA) was found significant with regard to paired adjusted means post-hoc test was applied. The level of significance chosen to test the hypothesis was chosen as .05 which was recognized as appropriate in relation to the research process adopted and the equipment used in the study. Finally to find out the significance of the differences between pre-test and post-test means of the two experimental groups and control group 't' test was applied.

**Table 1:** Analysis of covariance for three experimental and Control groups on Trait Anxiety

|                          | Asana | Pranayama | Dhyana | Control | Ss                     | DF      | MS            | F      |
|--------------------------|-------|-----------|--------|---------|------------------------|---------|---------------|--------|
| Pre Test means           | 47.00 | 48.20     | 47.65  | 48.00   | A: 16.6<br>W: 1219.8   | 3<br>76 | 5.5<br>16.05  | .34    |
| Post Test means          | 33.20 | 37.00     | 36.25  | 47.50   | A:2328.0<br>W:1935.9   | 3<br>76 | 776.0<br>25.5 | 30.43* |
| Adjusted Post Test means | 33.54 | 36.77     | 36.28  | 47.36   | A: 2212.1<br>W: 1657.5 | 3<br>75 | 737.4<br>22.1 | 33.37* |

$P < .05 = 2.73$

Table presents the pre-test, post-test and adjusted post-test means of three experimental groups Asana, Pranayama, Dhyana and Control Groups. The pre-test means for these groups are 47.00, 48.20, 47.65 and 48.00 respectively. The resultant 'F' ratio .34 is not found significant at  $p < .05$ . The post-test means for the above same groups are 33.20, 37.00, 36.25 and 47.50 respectively. The resultant 'F' ratio 30.43 is found significant at  $p < .05$ .

The adjusted post-test means for the above same groups are 33.54, 36.77, 36.28 and 47.36 respectively. The 'F' value being 33.37 is found statistically significant ( $p < .05$ ). which indicate that the groups are significant different at the end of twelve week Yogic training Programme on Trait Anxiety. Since obtained 'F' value 33.37 is found greater than the table value of 2.73. Further, Scheffe's post-hoc test of significance has been applied to determine that in which of the paired of adjusted mean an actual difference existed. The result of post-hoc test has been presented in table.

**Table 2:** Paired Adjusted Final means and differences between the means for three experimental groups and control group on State Anxiety.

| Adjusted Means |           |        |         | Differences Between Means | Scheffe's Post-hoc |
|----------------|-----------|--------|---------|---------------------------|--------------------|
| Asana          | Pranayama | Dhyana | Control |                           |                    |
| 33.54          | 36.77     | -      | -       | 3.23                      | 4.26               |
| 33.54          | -         | 36.28  | -       | 2.74                      | 4.26               |
| 33.54          | -         | -      | 47.36   | 13.82                     | 4.26               |
| -              | 36.77     | 36.28  | -       | 0.49                      | 4.26               |
| -              | 36.77     | -      | 47.36   | 10.59                     | 4.26               |
| -              | -         | 36.28  | 47.36   | 11.08                     | 4.26               |

From the description presented in this table it has been found that there is no significant difference in the adjusted means between groups of Asana and Pranayama, Asana and Dhyana, Pranayama and Dhyana. However, a significant difference is

observed for Asana, Pranayama and Dhyana group in comparison to control Group as the difference between the adjusted means 13.82, 10.59 and 11.08 of these groups were found greater than the obtained critical ratio.

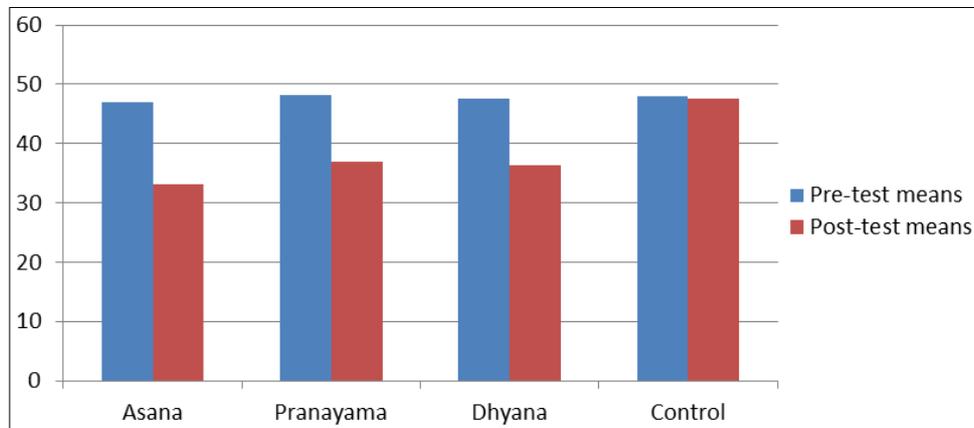
**Table 3:** Significance of the Differences between Pre-test and Post-test of experimental groups and Control group on Yogic Practices (State Anxiety).

| Groups    | Pre-Test |      | Post-Test |      | Pairst 't' Value |
|-----------|----------|------|-----------|------|------------------|
|           | Mean     | S.D. | Mean      | S.D. |                  |
| Asana     | 47.00    | 3.24 | 33.20     | 4.26 | 11.02            |
| Pranayama | 48.20    | 4.70 | 37.00     | 6.68 | 8.11             |
| Dhyana    | 47.65    | 3.87 | 36.25     | 4.95 | 10.44            |
| Control   | 48.00    | 4.08 | 47.50     | 3.82 | 0.90             |

\*t .05 (df .38) = 2.02

In this table significance of the differences between the pre-test and post-test means of three experimental (Asana, Pranayama, Dhyana) and Control group are shown. The pre-test mean values of Asana group, Pranayama group, Dhyana group and Control group were 47.00, 48.20, 47.65 and 48.00 respectively. Whereas, the post-test mean values of the above same groups were 33.20, 37.00, 36.25 and 47.50 respectively.

The 't' values were 11.02, 8.11, 10.44 and 0.90 respectively. The 't' values of Asana, Pranayama, Dhyana groups in relation with the Control group were found statistically significant at .05 (df .38) level. The intra-group differences between the means of pre-test and post-test on State Anxiety are presented in figure.



**Fig 1:** Pre-test and post-test means of Asana group, Pranayama group, Dhyana group and Control groups on trait Anxiety

Trait anxiety significant differences are found among the groups at the post-test stage. Differences among group were also found significant at adjusted post-test means. Scheffe's post-hoc analysis was conducted to find out the direction of differences, treatments groups significantly differed with the control group on trait anxiety. The above finding confirms the positive effect of Asana, Pranayama and Dhyana treatment in lowering Trait Anxiety of the subject.

**Conclusion**

On the variable trait anxiety, subjects belonging to experimental groups i.e. Asana, Pranayama and Dhyana group differed significantly than the control group. All the three experimental groups exhibited low post-test scores on the variable trait anxiety indicating positive effect of selected yogic practices (Asana, Pranayama and Dhyana) in lowering

the trait anxiety of subjects.

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