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## Effect of 8 weeks pranayama training on the anxiety level of college students

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### Abstract

Yoga is considered as one of the oldest medical practices throughout the world and with its increasing awareness and importance United Nations General Assembly has declared June 21" as the International Yoga Day. Yoga is an invaluable gift of India's ancient tradition looking at its scope and immense importance the study was conducted. The Purpose of the study was to find out, the intervened effect of yoga on State Anxiety among college students. The subjects chosen for the study were 30 students of different genres from A.S.B.A.S.J.S.M. collage Bela, Roper. Their age ranged between 20 and 25 years. They were randomly divided into two groups of 15 each, one being the experimental group and the other control group. The experimental group underwent a scheduled yoga practice for a period of 8 weeks, 6 days/week as the control group was on daily regular routine. The status of State Anxiety was measured before (Pre-test) and after (Post-test) the experimental period using Manual of State-trait Inventory developed by Spiel Berger (1970). The data were analysed statistically for significant differences. Later applying analysis of variance and analysis of co-variance (in case of insignificance), significance in variance is shown, and further Scheffe.s test was applied. The result proves that the yogic scheduled practices have made a significant impact on the State Anxiety of the experimental group compared to the control group.

**Keywords:** 8 weeks pranayama training

### Introduction

State Anxiety is defined as a transitory emotional state or condition of the human organism that is characterized by subjective consciously perceived feelings of tension and apprehension and heightened autonomic nervous system activity. (Spielberger, 1970). The term 'yoga' is used to indicate both the 'End' as well as the 'mean'. In the sense of the 'End', the word 'Yoga' signifies 'Integration' at its highest level. All the means that subscribe to reach this goal also constitute yoga, in the sense of 'yukti' the means or technique. All the practices, whether high or low are calculated to help the progress of the aspirant towards such integration are together known by the name 'yoga' Asana are those postures with dynamic moments oriented to create physical and physiological changes in the human system. Functions of all vital organs, stimulation of glands and regulation of the blood flow are achieved by proper postures and the muscles in our body are thus firmed and strengthened. Pranayama is the practice of breathing exercises with the three scientific phases namely Puraka (Inhalation), Kumbhaka (Holding the air in the lungs) and Rechaka (Exhalation) in a progressive manner that works centrally and the effects spread to the periphery. From the physical point of view, a proper balance among the nadis ensures health, strength, peace and longevity. Pranayama have seasonal effects in its technique and practice. . Hence the selection of pranayama for the practice schedule should be based on the seasonal requirements. During practice the three phases, inhalation, holding the breath and exhalation should be observed as 1:1:1 (Initial Stage) 1:2:2 (Intermediate Stage) and 1:4:2 (Advanced Stage). Meditation is a systematic method of mental practice that gives a complete mental, physical and emotional relaxation. (Iyengar, 2001); Designed Training Package: The science of yoga proclaims that yogic techniques and practices aim at selective as well as wholesome shaping of human body and mind. Hence a selective package of yogic practices consisting Asana (Physical Pastures), Pranayama (Breathing Practices) and Meditation (Mental Practices) was designed with performance norms intended to create a positive impacts among the experimental subject on state anxiety.

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The Scientific basis of yoga offers a wide range of variations in its scopes and benefits on how to utilize those effects for various needs and requirements of general health and fitness more specifically in personal life style. An intensive review of related literature on these area and consultations with the experts in yoga a selected yoga-training package was designed for the subjects under study. The feasibility and acclimatization of the routine was taken to heart during the training routine.

**Research Challenge**

The Purpose of the study was to find out, the intervened effect of yoga on State Anxiety.

**Methodology**

The subjects chosen for the study were 30 sportsmen who represented A.S.B.A.S.J.S.M. collage Bela, Roper aged between 20 and 25 years. They were randomly divided into two groups of 15 each, one being the experimental group and the other a control group. The experimental group underwent a scheduled yoga practice for a period of 8 weeks, 6 days/week as the control group was on daily regular routine. The status of state anxiety was measured before (Pre-test) and after (Post-test) the experimental period using Spielberger.s manual of State-Trait Anxiety Inventory (1970). The data were analyzed statistically for significant differences. Later applying analysis of variance and analysis of co-variance (in case of insignificance), significance in variance is shown, and further Scheffe.s test was applied. The Inventory consisted of 40 statements (20-state anxiety and 20-trait anxiety). It includes both positive and negative statements. It is a liker method and each statement consists of 4 responses. The respondent made a tick mark on any one of the responses that fit to them best. The inventory was scored with the help of scoring key and which is given below. A separate scoring method was followed for positive and negative statements and added and it was treated as individual score the total score constitute the anxiety score. The range of score is 20 to 80 scoring key. For items 2, 5, 8, 10, 11, 15, 16, I9, 20 subjects response, almost, never, sometimes, often and almost always are to be given 4, 3, 2 and 1 scores respectively. For the rest of the items scoring is to be done in the opposite way. (Spielberger, 1970).

**Training Package of Yoga**

**Asana** - Padmasana, Vajrasana, Paschimothanasana, Matsyasana, Artha Matsyendrasana, Halasana, Bhujangasana, Dhanurasana, Shalabhasana, Sarvangasana, Pawanmuktanasana, Chakrasana, Utthita Parvakonasana, Virabhadrasana, Utkatasana, Vrksasana, Tadasana, Garudasana, Shavasana.

**Pranayama** - Nadisuddhi, Nadi Shodhana, Ujjayi, Kapalabhati, Bhramari, Bhastrika, Sitalai, Sitakari

**Meditation** - Observing the breath

**Table 1:** Pranayama Training Schedule

S. NO	Description	Period
1	Training Duration	8 Weeks
2	Days	6 days a week
3	Training Session	Morning
4	Duration	90 Minutes
5	Warm Up	15 Minutes
6	Specific Training	45 Minutes
7	Rest	15 Minutes
8	Cool Down	15 Minutes

Statistical Analysis and Findings: The collected scores from Pre-test and Post-test after statistical analysis reveal significance in the final output of the scores arrived after the experimentation period in post-test scores. The Table-I presents the result of statistical result of significance.

**Table 2:** Analysis of Variance and Analysis of state Anxiety of control an Experimental Group

Sources of variance	Df	SSx	SSy	SSxy	SSyx	MSyx	F
Between Mean (K-1)	1	0.03	187.5	2.5	182.88	182.88	30.48
Within Mean (N-K)	27	938.93	971.2	871.2	162.1	6	
Total	28	938.96	1158.7	874.1	344.98		

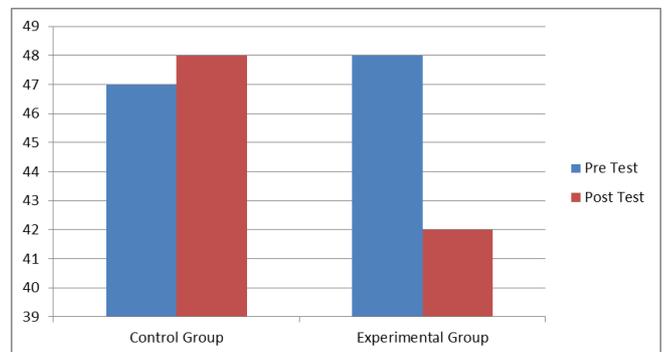
Table value DF (1, 27) at 0.05 Level: 4.21/DF (1.27) At 0.05 levels: 7.64

**Table 3:** Scheffe's test for significance of the difference between paired Means

Mean value		M.D	LS
Group 1	Group 2		
47.57	42.63	4.93	0.01

CI – value for 0.025 levels: 1.83/0.01 level: 2.47

Table – 1 indicates that after the training programme significant difference was found in (State Anxiety) computation of Analysis of variance as the obtained “F”-ratio computed from Adjusted mean sum of squares was 30.46 against the prescribed tabulated value of 4.21 at 0.05 Level and 7.64 at 0.00] level of confidence for 1 and 27 degrees of freedom. 80 the Obtained “P” ratio was significant at both the levels of confidence. The result of investigation revealed that there was significant improvement in State Anxiety through scheduled yoga practice programme. The results by and large were in conformity with the findings of Golubev (1 983). The means of Pre and Post-test scores of two groups in State Anxiety have been presented graphically in Fig-1.



**Fig 1:** Mean state Anxiety (Pre and Post-test) of Control and Experimental Group

**Conclusion**

The Scheduled yogic practices made impacts on State Anxiety during post training assessment among the college sportsmen. Based on the finding it is concluded that the yogic practices package could be of great benefit to maintain and develop a positive State Anxiety.

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