

Influence of Yogasana and Pranayama on Selected Psychological Parameters in Post Graduate Students

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Abstract

The role of yoga in sports is becoming increasingly popular to reduce anxiety and aggression and also to unfold the potentialities hidden in every sportsman. The purpose of this study was to examine the influence of Yogasana and Pranayama on Selected Psychological parameters in Post Graduate Students. This study comprised a twelve week randomized controlled trial. A total of 40 physical education students participated in this study voluntarily. They were randomly divided into two groups: those undertaking a Yogasana and Pranayama (n=20) and a control group (n=20). Their age ranged between 23 and 27 years. The subjects took part in a Yogasana and Pranayama for one hour per day, three days a week for twelve weeks. The Taylor's manifest anxiety scale was used to assess anxiety of subjects and aggression was assessed by using Pati's aggression scale before and after the completion of the Yogasana and Pranayama. Data were analyzed by applying ANCOVA statistical technique. Significance level was set at $P < 0.05$. After the twelve weeks of the Yogasana and Pranayama, significant differences were found in the anxiety and aggression in the experimental group ($p < 0.05$). There were no significant differences in the control group after the experiment in terms of the same measures ($P > 0.05$). The Yogasana and Pranayama proved to be a useful exercise modality for reduced anxiety and aggression in Post Graduate Physical Education Students.

Key words: Yogasana and Pranayama, anxiety and aggression.

Introduction

Yoga is an ancient discipline designed to bring balance and health to the physical, mental, emotional, and spiritual dimensions of the individual. It is long popular practice in India that has become increasingly more common in Western society. "Yoga" means union of our individual consciousness with the Universal Divine Consciousness in a super-conscious state known as Samadhi (Vivekananda, 2007). A sound mind grows only with a sound body and the growth of one is complementary to that of the other. This is indicated during the period of illness, when ailing body effects the usually attitude of mind. Mental discontent is caused by physical disequilibrium.

Man is endowed with mind, intellect and ego collectively known as consciousness, which is a source of thinking, understanding and acting. As the wheel of life turns, consciousness experiences the fine miseries of ignorance, selfishness, attachment, aversion and love of life. Asanas and pranayama bring the wavering mind to a state of stability.

Review of Related Literature

Gupta et al., (2006) examined the short-term impact of a comprehensive, yet brief, lifestyle intervention based on yoga in diseased and normal individuals. The research subjects had a history of hypertension, coronary artery disease,

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diabetes mellitus, obesity, psychiatric disorders and thyroid disorders. The intervention consisted of asanas, pranayama, relaxation techniques, group support, individualized advice, lectures and films on philosophy of yoga, and the place of yoga meditation in daily life, meditation, and stress management. Outcome measures were anxiety scores taken on the first and last days of the course. Among diseased individuals, improvement was seen in anxiety levels. Short educational program for stress management and lifestyle modification based on yoga leads to reduction in anxiety.

Stueck et al., (2005) determined whether yoga can assist in reducing stress responses in preteens. Forty-eight 11-12-year olds with abnormal exam anxiety participated in the study with 21 students assigned to the experimental group to participate in a 15-session program of relaxation, yoga, and other meditation and social interaction exercises. Each session lasted one hour. A questionnaire with stress-related items was given to students before the sessions began, immediately after the 15-week program, and three months after the program ended. Students involved in the program showed improvement in several stress measures. Significant effects were seen in a comparison immediately after the training: decreased aggression, decreased helplessness in school, decreased physical complaints, and improved stress coping abilities. In a comparison 3-month later, the following effects were seen: improvements in emotional balance, decreased anxiety, decreased shyness in social contacts, and decreased impulsiveness. In the first post-test measurement, parents also reported their students as being calmer and more balanced (71.4%), less impulsive, aggressive and hot-tempered (38.1%), more concentrated (38.1%), and having fewer complaints (38.1%). Comparisons to the control group were not statistically measured.

Methodology

The purpose of the study was to examine the influence of yogasanas and pranayama on selected psychological parameters in Post Graduate students. The subjects were selected from Rajivi Gandhi Post Graduate College, Rajahmundry, Andhra Pradesh, conducted a yoga camp for post graduate students for 3 months. Sixty students attended this camp, out of which forty subjects were selected at random by lot procedure. Their age ranged from 23 to 27 years. They were asked to undergo medical checkup and were found to be normal, healthy and fit enough to undergo experimentation. Random group design was used for this experimental study. Before the administration of tests and yogasanas and pranayama practices, the purpose of the study was explained in details to the subjects to ensure proper understanding and effective co-operation. The method of doing each yogasanas, pranayama was explained to the subjects before the experiment. The investigator himself demonstrated each item of the yogasanas, pranayama. The model performance by some of the subjects was also done to make the subjects clearly understand all the techniques. The following Yogasana and Pranayama were Practices: Standing Postures: Natarajasana, Trikonasana, Padhashtasana. Sitting Postures: Paschimottanasana, Vajrasana, Ushtrasana, Shashankasana, and Padmasana. Prone Postures:

Makarasana, Bhujangasana, Dhanurasana. Supine Postures: Matsyasana, Halasana and Chakrasana. Relaxation Posture: Shavasana. Pranayama: Anuloma-Viloma, shitali, Sitkari and Ujjayi. Asanas, Pranayama were practiced for 45 minutes in this order. The subjects were tested on the selected psychological parameters at the beginning (pre-test) and at the end of the experimental period(post-test). The data collected from the two groups on the selected psychological parameters were used for the statistical treatment to find out whether there was any significant difference between the adjusted means by analysis of covariance method. The level of significance was fixed at .05 level. The analysis of data was done in SPSS/PC+ computer system using standard statistical package.

Results

Analysis of Anxiety

The data of anxiety before (pre-test) and after the yogasanas and pranayama (post-test) of control group, experimental group were analyzed and presented in Table I. The pre and post-test mean of two groups have been presented in Fig.1.

Table-I

Computation of Analysis of Covariance on Anxiety

Test	Con. Group	Exp Group	SV	SS	df	MS	F
Pre Test	25.10	25.20	B	1000	1	.1000	.0084
			W	455.00	38	11.97	
Post Test	24.25	20.20	B	164.03	1	164.03	16.36*
			W	380.95	38	10.02	
Adjusted Mean	24.26	20.18	B	166.04	1	166.04	17.45*
			W	352.04	37	9.51	

*Significant at 0.05 level of confidence for the degree of freedom 1 and 38 is 4.09 and df 1 and 37 is 4.106

The result presented in Table I indicated that the pre-test mean of the control group was 25.10 and experimental group was 25.20. The obtained F-ratio of .0084 was lesser than the required table value of 4.096. It indicated that, no significant difference existed between the pre-test mean of the two groups.

The post-test mean of the control group was 24.25 and the experimental group was 20.20. The obtained F-ratio for the post-test mean 16.36 was found to be higher than the table value of 4.096 required for significant 1 and 38 degrees of freedom.

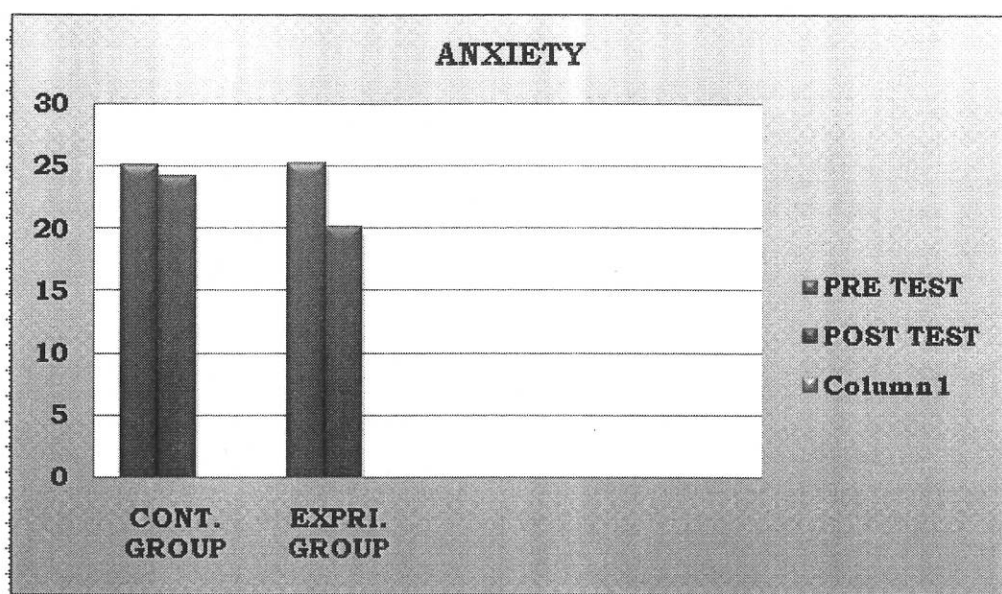
The adjusted post-test mean of the control group and experimental group were 24.26 and 20.18 respectively. The obtained F-ratio was 17.45 was greater than the tabulated F-ratio for degrees of Freedom 1 and 37 was 4.106. Hence the obtained F-ratio was significant at .05 level of confidence. The results of

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the study revealed that there was a significant reduction in anxiety as a result of the practice of yogasanas and pranayama.

Figure-1

Bar Diagram on Pre and Post Test Means of Anxiety



Analysis of Aggression

The data of aggression before (pre-test) and after the yogasanas and pranayama (post-test) of control group, experimental group were analysed and presented in Table II. The pre and post test mean of two groups have been presented in Fig. 2.

Table-II

Computation of Analysis of Covariance on Aggression

Test	Con. Group	Exp Group	SV	SS	df	MS	F
Pre Test	510.50	530.90	B	4161.60	1	4161.60	1.72
			W	92116.80	38	2424.13	
Post Test	512.95	463.35	B	24601.60	1	24601.60	11.80*
			W	79201.50	38	2084.25	
Adjusted Mean	519.23	457.07	B	36963.81	1	36963.81	30.87*
			W	44304.80	37	1197.43	

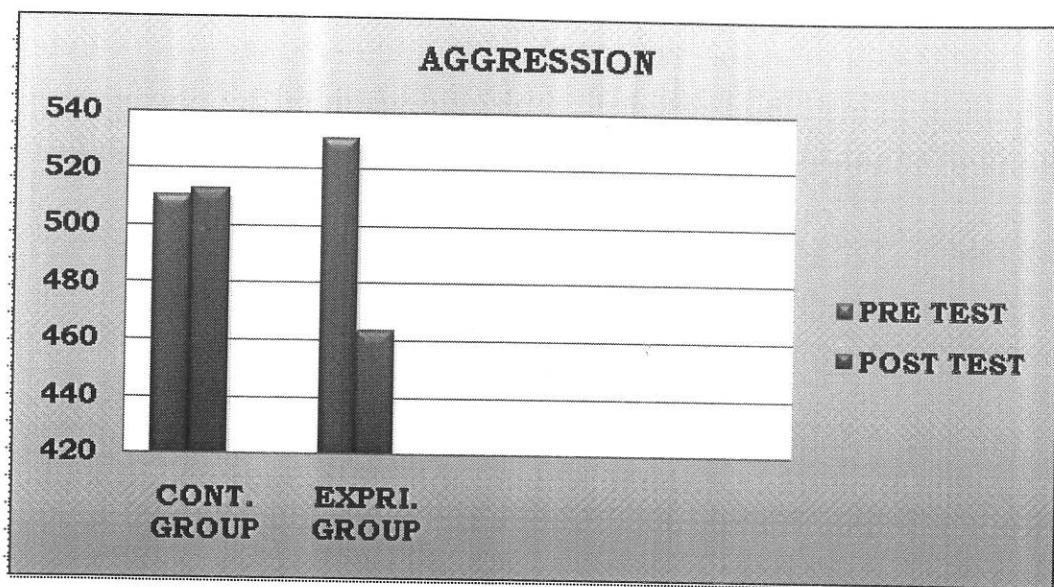
*Significant at 0.05 level of confidence for the degree of freedom 1 and 38 is 4.09 and df 1 and 37 is 4.106

Table II indicated that the pre-test mean of the control group was 510.50 and experimental group was 530.90. The obtained F-ratio of 1.72 was lesser than the required table value of 4.096. It proved that, no significant difference existed between the pre-test mean of the two groups.

The post-test mean of the control group was 512.95 and the experimental group was 463.35. The obtained F-ratio for the post-test mean, 11.80 was found to be higher than the table value of 4.096 required for significant 1 and 38 degrees of freedom.

Figure-2

Bar Diagram on Pre and Post Test Means of Aggression



The adjusted post-test mean of the control group and experimental group were 519.23 and 457.07 respectively. The obtained F-ratio 30.87 was greater than the required tabulated F-ratio of 4,106. Hence the obtained F-ratio was significant at .05 level of confidence. The results of the study revealed that there was a significant reduction in aggression as a result of the practice of yogasanas and pranayama.

Discussion and Findings

The results of the study revealed that there was significant reduction in anxiety as a result of practice of yogasanas and pranayama. It was hypothesized that yogasanas and pranayama practices would decrease anxiety, and the same was accepted. The findings of the study indicated that aggression of subjects had decreased significantly due to practice of yogasanas and pranayama. It was hypothesized that yogasanas and pranayama, practices would decrease aggression, thus the hypothesis was accepted. It was observed from the (Stueck and Gloeckner, 2005 & Deshpande Nagendra and Raghuram, 2008) review

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that studies on anxiety and aggression have been undertaken extensively and their results showed decrease in aggression.

Conclusions

In the light of the study undertaken with certain limitations imposed by the experimental conditions, the following conclusions were drawn.

1. Yogasanas and pranayama reduces the level of anxiety.
2. Yogasanas and Pranayama reduced aggression.

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