Article

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Influence of Asanas, Combination of Asanas and Pranayama on Stress among College Students

Dr.A. Sellaperumal
Director of Physical Education
Ramakrishna Mission Vivekananda College, Chennai-04.

ABSTRACT

The purpose of the study was to find out the influence of asanas, combination of asanas and pranayama on selected psychological variable in stress among college students. To achieve the purpose of the study, sixty students were selected from RKM Vivekananda college students, Chennai as subjects at random and their age was ranged from 17 to 22 years. The subjects were divided into three equal groups. The subjects (N=60) were randomly assigned to three equal groups of twenty men students each. The groups were assigned as experimental group-1 experimental group-2 and control group in an equivalent manner. Training programs for experimental group were designed separately. The scientifically designed programmes were given to the subjects of experimental group. The subjects of the control group were not participated in training. The treatment groups underwent the programme four days a week for a period of sixteen weeks with sixty minutes per session. In order to find out whether the obtained difference between the means of the selected variables in the pre test, mid test and post test are statistically significant, Repeated measures ANOVA was applied,. When the F ratio was found to be significant Newman-Keuls post hoc test was applied to test which of the possible comparison among the means are significant. Analysis of Covariance was applied to determine the significant difference among the three groups namely Asanas training group, Asanas with Pranayama training group and the control grouping the development of selected variables after 16 weeks of training. The results of the study reveal that the asanas training, asanas with pranayama training and control group had differed significantly in stress. The asana training group and asanas with pranayama training group had significantly decreased the stress than the control group, and the asanas with pranayama training group had significant decrease in stress than the asanas training group. In the context of the present trend, the rational use of asanas training and asanas training with pranayama training is essential to decrease the stress.

Keywords: Yoga, stress, asanas, combination of asanas, pranayama, Everly and Gridano's psychological stress scale.

Introduction

Yoga provides one of the best means of self-improvement and attaining one's full potential. In the advanced stages of yoga, super conscious states are attained which result in a feeling of bliss, deep peace and the emergence of psychic powers. Yoga was developed and perfected over the centuries by philosophers and mystics in India. It is basically a method by which we increase the body's supply of energy and remove any interference to the transmission of energy throughout the body. Yoga has specialized in this subject for thousands of years, and streamlined the methods to attain this aim.

Methodology

To achieve the purpose of the study, sixty students were selected from RKM Vivekananda College, Chennai at random and their age ranged from 17 to 22 years. The subjects were divided into three equal groups. The subjects (N=60) were randomly assigned to three equal groups of twenty men students each. The groups were assigned as experimental group-1 experimental group-2 and control group in an equivalent manner. Training programs for experimental group were designed separately. The scientifically designed programmes were given to the subjects of experimental group. The subjects of the control group were not participated in training. The treatment groups underwent the programme for four days a week for a period of sixteen weeks with sixty minutes per session.

Everly and Gridano's psychological stress scale (Stress), purpose to measure stress level
Methods of scoring for stress

The stress score was answered by the subjects in term of four alternatives like A, B, C and D". The questionnaire is scored with the help of the key. If the responses are given by the subject that corresponds to the key for a particular item, then a score QF 3-0(A=3, B=2, C=1, D=0) will be given. The scoring obtained for each statement was added and it was treated as individual score. The total score constitutes the psychological stress score. The range of score is 0-42, the user the score lower the psychological stress score of the subject is given in appendix.
Analysis and interpretation of the data

In order to find out whether the obtained difference between the means of the selected variables in the pre test, mid test and post test are statistically significant, Repeated measures ANOVA was applied,. When the F ratio was found to be significant Newman-Keuls post hoc test was applied to test which of the possible comparison among the means are significant. Analysis of Covariance was applied to determine the significant difference among the three groups namely Asanas training group, Asanas with Pranayama training group and the control grouping the development of selected variables after 16 weeks of training. If the mean difference was significant, the pairs of adjusted final group means was tested for significance by applying Scheffe's post-hoc test.

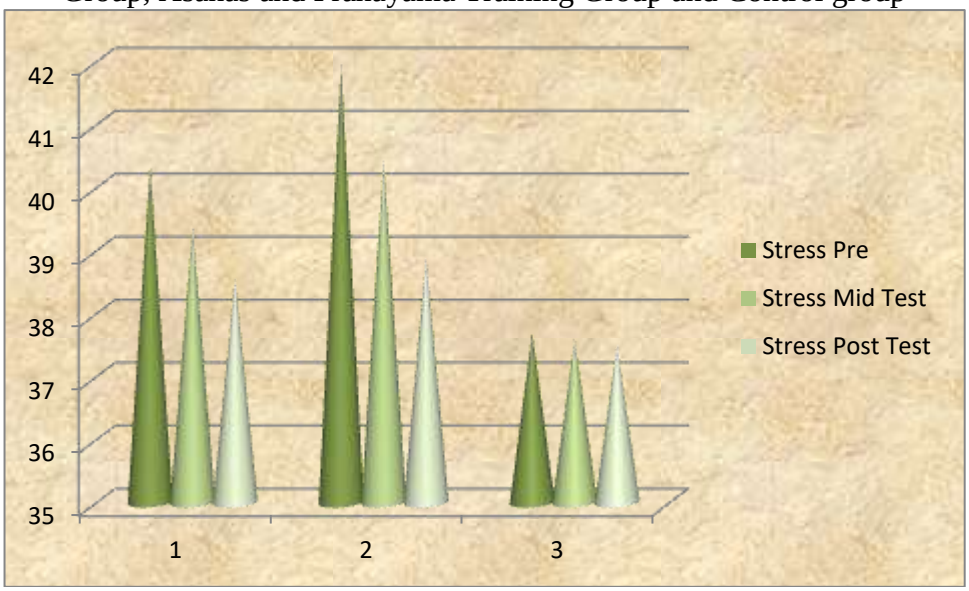
Table 1
Summary of the Repeated Measures ANOVA of Asanas Training Group, Asanas with Pranayama Training Group and Control group in Stress

S.No	Groups	Variables	Source of Variation	Sum of Squares	DF	Mean Squares	F ratio
1	Asanas	Stress	Treatment	32.433	2	16.217	24.748
			Residual	24.900	38	.655	
2	Asanas With Pranayama	Stress	Treatment	93.033	2	46.517	171.615
			Residual	10.300	38	.271	
3	Control	Stress	Treatment	.400	2	.200	.015
			Residual	497.600	38	13.095	

Table value for df 2 and 38 is 3.245

An examination of Table 1 indicates that the obtained F ratios of Asanas training group were greater than the required table value 3,245 at 0.05 level of confidence in resting pulse rate. It is inferred that the treatment means of these variables differ significantly. It is clear from the results that the mean gains in these variables among the pre test, mid test and post test were statistically significant. The obtained F ratio of Asanas with Pranayama training group was lesser than the required F ratio of 3.245 at .05 levels in resting pulse rate. It is inferred that the mean gains is statistically significant in stress.

Figure -I
Bar Diagram showing mean values of pre-test, mid test and post test of Stress of Asanas Training Group, Asanas and Pranayama Training Group and Control group



1 – Asana Training Group, 2 - Asanas with Pranayama Training Group, 3 - Control Group

Table 2
Analysis of Covariance on Pre, Post and Adjusted Post test means on Stress among Asanas Training Group, Asanas with Pranayama Training Group and Control Group

Test	Asanas Training Group	Asanas With Pranayama Training Group	Control Group	Source of variance	Sum of Squares	df	Mean Squares	F-ratio
Pre-test Mean	40.35	41.95	37.70	Between Groups	184.300	2	92.150	2.182
				Within groups	2407.700	57	42.240	
Post-test Mean	38.55	38.90	37.50	Between Groups	21.233	2	10.617	.235
				Within groups	2573.750	57	45.154	
Adjusted Post-test Mean	38.248	37.217	39.485	Between Groups	47.946	2	23.973	1.721
				Within groups	780.216	56	13.932	

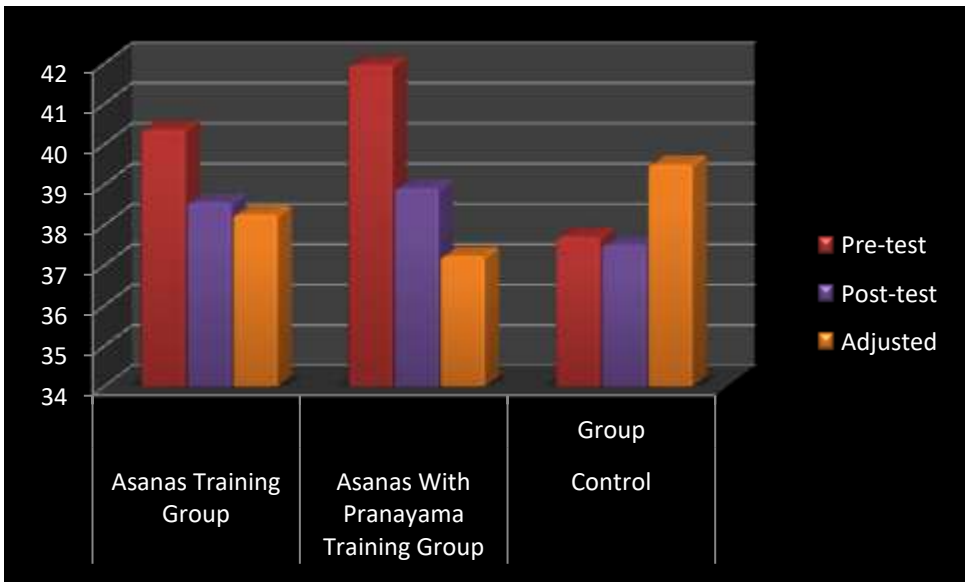
* Table value for all ANACOVA tables 3.16 at 5% level of significance

Table 2 reveals the computation of 'F' ratios on pre test, post test and adjusted post test means of Stress of Experimental Group I, Experimental Group II and Control group. The obtained 'F' ratio for the pre test means of Stress of Experimental Group I, Experimental Group II and control group is 2.182. Since the 'F' value was less than the required table value of 3.16 for the degrees of freedom 2 and 56, it was found to be not significant at 0.05 level of confidence. Further, the post test 'F' ratio .235on Stress was lesser than the required table value of 3.16 for the degrees of freedom 2 and 56, hence it was found to be statistically not significant at 0.05 level of confidence.

The obtained 'F' ratio for the adjusted post test means of Stress of Experimental Group I, Experimental Group II and control group is 1.721. Since the 'F' value was lesser than the required table value of 3.16 for the degrees of freedom 2 and 57, it was found to be statistically not significant at 0.05 level of confidence. From these results it was inferred that Asanas training group and Asanas with Pranayama training group and control; group had not differed significantly in stress Mean values of pre, post and adjusted post test of Stress of Asanas Training Group, Asanas with Pranayama Training Group and Control group were presented in figure II.

Figure – II

Bar Diagram showing mean values of pre-test, post test and adjusted post test of Stress of Asanas Training Group, Asanas and Pranayama Training Group and Control group



Conclusion

The results of the analysis reveal that the asanas training, asanas with pranayama training and control group had differed significantly in stress. The asana training group and asanas with pranayama training group had significantly decreased the stress than the control group, and the asanas with pranayama training group had significant decrease in stress than the asanas training group. In the context of the present trend, the rational use of asanas training and asanas training with pranayama training is essential to decrease the stress.

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