



THE EFFECT OF INVERTED YOGA PRACTICE AND BRAIN FITNESS EXERCISES ON SELF CONFIDENCE OF COASTAL AREA SCHOOL STUDENTS

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Abstract:

The purpose of the study was to find out the effect of inverted yoga practice and brain fitness exercises on self confidence of coastal area school students. For this, study was conducted on 90 boys who were studying in St. Francis HSS Arthunkal, Alappuzha, Kerala, India. The students age ranged from 13 to 16 years. The subjects were randomly arranged equally into 3 groups. Experimental Group I underwent inverted Yoga practice (No.30), Experimental Group II Underwent brain fitness exercise (No.30) and group III acted as a control group (No.30) who did not undergo any specific training programme. The training period was limited to 12 weeks. However both the groups continued to participate in their regular extracurricular activities during school hours. As far as the criterion variables of the present study were concerned, it was delimited to self-confidence. Standard methods were followed for the data extraction for each of the variables. Data of the entire groups were computed statistically by using analysis of co-variance (ANCOVA) to see the deliverance against the groups. If the ANCOVA was shown significant, Schaffee's Post Hoe Test analysis were made to find out the paired mean difference. To test the hypothesis, 0.05 level of significant was taken in all the cases.

Key Words: Inverted Yoga, Brain Fitness Exercise & Self-confidence

Introduction:

Yoga is a science of life which helps man to attain their highest potential and highest state of consciousness. It is a systematic body of knowledge concerned with the physiological and mental processes that change the physiology of body through respiratory manipulation, postures and cognitive control. Similar studies were conducted by Sandy Kimbrough /Rick Balkinand Allison Rancich/ Naveen K.V, Nagrathma R /Upadhyay /D.K /V.Malgothra, D. Sarkar. etc. and recommended that effect of yoga practice and brain fitness exercises would have positive effect on the life skills of school students. An inverted Yoga is most generally categorized as any asana in which the head is below the heart. And while doing the same headstand, handstand, forearm stand, and shoulder stand immediately come to mind. The term brain fitness reflects a hypothesis that cognitive abilities can be maintained or improved by exercising the brain, in analogy to the way physical fitness is improved by exercising the body. Coastal area children are more likely to be subjected to poor service and economic conditions as compared to other children. In this context, ancient traditional practice of Yoga might be helpful in improving mental health and thus cognitive development. Yoga has multiple physical, mental and spiritual benefits and holds that the influence of the mind on body is far more powerful than the influence of body on mind. Even though there are several research reports indicating positive impact of Yoga on health, there are limited research studies exploring effect of Yoga and brain fitness exercises on self confidence of coastal area school students. Therefore, the goal of this research study is to determine whether Yoga intervention and Brain fitness exercises have lasting effects on life skills of coastal area school students.

Methodology:

The purpose of the study was to find out The Effect of Inverted Yoga Practice and Brain Fitness Exercises On self confidence Of Coastal Area School Students. For this, study was conducted on 90 boys who were studying in St. Francis HSS Arthunkal, Alappuzha, Kerala, India. The students age ranged from 13 to 16 years. The subjects were randomly arranged equally in to 3 groups. Experimental Group I underwent inverted Yoga practice (No.30), Experimental Group II Underwent brain fitness exercise (No.30 and group III acted as a control group (No.30) who did not undergo any specific training programme. The training period was limited to 12 weeks. However both the groups continued to participate in their regular extracurricular activities during school hours. As far as the criterion variables of the present study were concerned, it was delimited to self-confidence. Standard methods were followed for the data extraction for each of the variables. Data of the entire groups were computed statistically by using analysis of co-variance (ANCOVA) to see the deliverance against the groups. If the ANCOVA was shown significant, Scheffee's Post Hoe Test Analysis was made to find out the paired mean difference. To test the hypothesis 0.05 level of significant was taken in all the cases. The subjects of experimenting groups then underwent a training of inverted Yoga practice and brain fitness exercises, under the supervision of an expert, for one hour in the morning, excluding, Sundays for a total period of 12 weeks. While undertaking the training programme the principles of sports training was followed. There were 15 students in each group at the baseline testing.

Table 1: Analysis of covariance of pre- test, post test and adjusted post test on self confidence of experimental group i, experimental group ii and control group

Test	Exp. Group I (Yoga Group)	Exp. Group II (Brain Fitness Exercises)	Control Group	Source of Variance	Sum of square	DF	Mean Square	F Value
Pre- Test Mean	16.833	16.133	15.633	Between	21.80	2	10.9000	1.0506
				Within	902.60	87	10.3747	
Post Test Mean	22.500	20.300	15.533	Between	760.95	2	380.475	39.5348
				Within	837.27	87	9.6238	
Adjusted Post-Test Mean	21.907	20.362	16.064	Between	538.69	2	269.3439	504.9178
				Within	45.88	86	0.5334	
Mean Gain	5.67	4.17	0.10					

* Significant at .05 level of confidence

(The table values required for significance at .05 level of confidence for 2 and 87 and 2 and 87 are 3.114 and 3.115 respectively).

Results of Self Confidence:

This table shows the Scheffe’s Post – Hoc Test results. The order adjusted final mean difference for Self Confidence of Yogic Practice, Brain Fitness Exercises and Control Group were tested for Significance at 0.05 level of confidence against confidential interval value. This Table shows the analyzed data on self confidence. The pre- test means of self confidence were 16.83 for Yogic practice, 16.13 for Brain Fitness Exercises and 15. 63 for Control Group. The obtained “F” ratio of 1.05 was lesser than the table value of F- ratio 3.114. Hence the pre- test was not significant at 0.05 level of confidence for the degree of freedom 2 and 87. The Post - Test means of self confidence were 22.50 for Yogic Practice, 20.30 for Brain Fitness Exercises and 15. 53 for Control Group. The obtained “F” ratio of 39.53 was higher than the table value of F- ratio 3.114. Hence the post - test was significant at 0.05 level of confidence for the degree of freedom 2 and 87. The adjusted post- test means of self confidence were 21.90 for Yogic Practice, 20.36 for Brain Fitness Exercises and 10.06 for Control Group. The obtained “F” ratio of 504. 91 was higher than the table value of F- ratio 3.115. Hence the adjusted post - test mean value shows significant at 0.05 level of confidence for the degree of freedom 2 and 87. Thus the result obtained proved that the intervention namely Yoga and Brain Fitness produced significantly different improvement among the experimental groups. In order to find out which training programme is to be used in the present study, the significance of adjusted mean was tested by Scheffe’s Post Hoc Test. The result of the same are presented in the table.

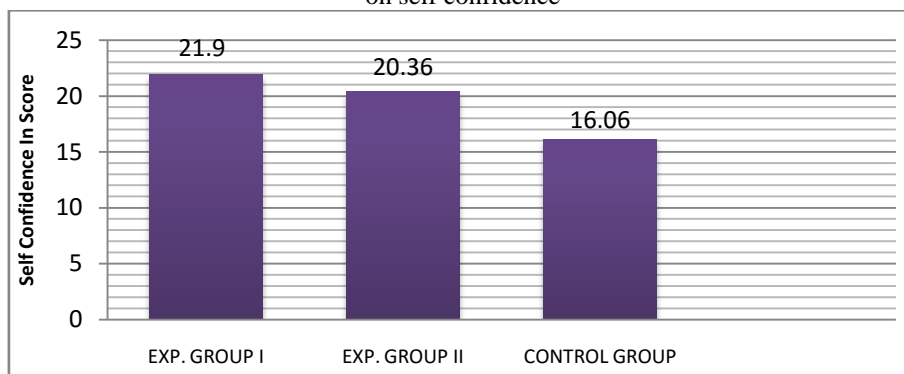
Table 2: Scheffe’s post hoc test mean differences on self confidence among three groups

Experimental Group I	Experimental Group II	Control Group	Mean Difference	Confidence Interval Value
21.90	20.36	-	1.54	0.53
21.90	-	16.06	5.84	0.53
-	20.36	16.06	4.29	0.53

* Significant at .05 level of confidence

Table shows the Scheffe’s Post – Hoc Test Results. The order adjusted final mean difference for Self Confidence of Yogic Practice. Brain Fitness Exercises and Control Group were tested for Significance at 0.05 level of confidence against confidential interval value. The mean differences between Yogic Practice, Brain Fitness Exercises and Control Group were 1.54, 5.84 and 4.29 respectively and it was seen to be greater than the confidential interval value of 0.53. Hence the above comparisons were significant. The mean values of self confidence are shown graphically.

Figure 1: The adjusted post test mean values of experimental group i , experimental group ii and control group on self confidence



Conclusion:

However the Yoga training produces greater improvement than the other group. The result of this study indicates that self confidence increased significantly over the 12 weeks training periods for Yoga and Brain Fitness Exercise. However the difference among the two experimental groups was significant. The Yoga produced higher improvement than Brain Fitness Exercise groups. The Brain Fitness Exercise group shows less improvement on Self Confidence. The Control group did not produce any significant improvement on self confidence.

Recommendations:

- ✓ Similar study may be conducted for the same age school girls students.
- ✓ It is recommended to the physical education teachers and yoga trainers to adopt these practices to improve the cognitive skills of school students
- ✓ It is recommended to the physical education teachers, other subject teachers, coaches and yoga trainers to adopt these practices to improve the psychological skills of school students.

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