



EFFECT OF INVERTED YOGA PRACTICES AND BRAIN FITNESS EXERCISES ON CRITICAL THINKING OF COASTAL AREA SCHOOL STUDENTS

Dr. Sinoj Joseph

Assistant Professor in Physical Education, P.K.M. College of Education,
Madapam, Kerala.

ABSTRACT

The purpose of the study was to find out the effect of inverted yoga practices and brain fitness exercises on, critical thinking of coastal area school students. To achieve the purpose of the present study, sixty (n=60) coastal area school boys from St.Alphonsa Matriculation School, Nagarcoil, Kanyakumari District, Tamil Nadu, India were selected at random as subjects and their age ranged from 14 to 17 years. The subjects were divided into four equal groups of fifteen students each. Group I acted as Experimental Group I (Inverted Yogic Practices), Group II acted as Experimental Group II (Brain Fitness Exercises group), Group III acted as Experimental Group III (Combined training) and Group IV acted as Control Group. The requirement of the experiment procedures, testing as well as exercise schedule was explained to the subjects so as to get full co-operation of the effort required on their part and prior to the administration of the study. Pre test was conducted for all the subjects on, critical thinking. The duration of experimental period was 16 weeks. After the experimental treatment, all sixty subjects were tested on, critical thinking. This final test scores formed as post-test scores of the subjects. The pre- and post-test scores were subjected to statistical analysis using dependent t-test and ANCOVA to find out the significance among the mean differences. Whenever the 'F' ratio for adjusted test was found to be significant, scheffe's post hoc test was used. In all cases 0.05 level of significance was fixed to test hypotheses. The combined training group had shown significant improvement in the, critical thinking than the inverted yoga practices, brain fitness exercises group and control group.

KEYWORDS: *Inverted Yogic Practices, Brain Fitness, Critical Thinking.*

INTRODUCTION

Many people will spend hours at a gym, lifting weights, doing cardio exercises and taking aerobic classes to keep their bodies physically fit. Usually when people are done at the gym they crash in front of a TV and put their brain into a passive mode where all the skills the mind has, including memory, thinking and logic stagnate. The brain is the most important part of the body and to not exercise it is to invite laziness and lethargy into life. Brain fitness is an approach to training the brain to perform at optimum levels and be sharp and strong even as old age acts to deteriorate your memory. A major part of brain fitness involves playing a variety of brain games to train different areas of the brain. Even simple games such as puzzles, riddles, crossword games and even memory match card games can help stimulate parts of the brain that involve cognitive ability, logical problem solving, memory retention and other brain skills.

Yoga is an antiquated type of unwinding and exercise that has numerous medical advantages, including bringing down cholesterol. Pranayama likewise associates the body to its battery, the sun powered



plexus, where gigantic potential vitality is put away. At the point when tapped through particular methods of this crucial vitality or prana, is discharged for physical, mental and otherworldly revival. Consistent practice evacuates blocks, which hinder the stream of crucial vitality. At the point when the phones work as one, they convey back agreement and wellbeing to the framework. 20 to 25 minutes of pranayama rehearse expands the limit of the lungs, breathing proficiency, course, cardiovascular effectiveness. It likewise standardizes circulatory strain, fortifies and conditions the sensory system, battles tension and sadness, enhances rest, processing and excretory capacities. It gives back rub to the interior organs, empowers the organs, upgrades endocrine capacities, standardizes the body weight, gives extraordinary moulding to weight reduction, enhances skin tone and composition.

METHODOLOGY

The purpose of the study was to find out the effect of inverted yoga practices and brain fitness exercises on critical thinking of coastal area school students. To achieve the purpose of the present study, sixty (n=60) coastal area school boys from St. Alphonsa Matriculation School, Nagarcoil, Kanyakumari District, Tamil Nadu, India were selected at random as subjects and their age ranged from 14 to 17 years. The subjects were divided into four equal groups of fifteen students each. Group I acted as Experimental Group I (Inverted Yogic Practices), Group II acted as Experimental Group II (Brain Fitness Exercises group), Group III acted as Experimental Group III (Combined training) and Group IV acted as Control Group. The requirement of the experiment procedures, testing as well as exercise schedule was explained to the subjects so as to get full co-operation of the effort required on their part and prior to the administration of the study. Pre-test was conducted for all the subjects on interpersonal communication. The duration of experimental period was 12 weeks. After the experimental treatment, all sixty subjects were tested on critical thinking. This final test scores formed as post-test scores of the subjects. The pre test and post-test scores were subjected to statistical analysis using dependent t-test and Analysis of Covariance (ANCOVA) to find out the significance among the mean differences. Whenever the ‘F’ ratio for adjusted test was found to be significant, scheffe’s post hoc test was used. In all cases 0.05 level of significance was fixed to test hypotheses.

DATA ANALYSIS

Table 1: Computation of Analysis of Covariance of Inverted Yogic Practices Brain Fitness Exercises Combined Training and Control Groups on Critical Thinking

	IYPG	BFEG	COTG	CG	Source of Variance	Sum of Squares	df	Means Squares	F
Pre-Test Means	59.33	59.26	58.86	58.66	Between Groups	4.60	3	1.53	0.78
					Within Groups	109.33	56	1.95	
Post-Test Means	79.80	80.20	90.00	59.13	Between Groups	7589.65	3	2529.88	830.76*
					Within Groups	170.53	56	3.04	
Adjusted Post-Test Means	79.85	80.24	89.96	59.06	Between Groups	7552.63	3	2517.54	831.87*
					Within Groups	166.44	55	3.02	

*Significant at 0.05 level

Table Value for 0.05 level for df 3 & 56 = 2.76

Table Value for 0.05 level for df 3 & 55 = 2.77

Table-1 shows that the pre-test means of inverted yogic practices, brain fitness exercises, combined training and control groups were 59.33, 59.26, 58.86 and 58.66 respectively. The obtained F-ratio for the pre-test was 0.78 and the table F-ratio was 2.76. Hence the pre-test mean F-ratio was insignificant at 0.05 level of confidence for the degree of freedom 3 and 56. This proved that there were no significant difference between the experimental and control groups indicating, that the process of randomization of the groups was perfect while assigning the subjects to groups. The post-test means of the inverted yogic practices, brain fitness exercises, combined training and control groups were 79.80, 80.20, 90.00 and 59.13 respectively. The obtained F-ratio for the post-test was 830.76 and the table F-ratio was 2.76. Hence the pre-test mean F-ratio was insignificant at 0.05 level of confidence for the degree of freedom 3 and 56. This proved that the differences between the post-test means of the subjects were significant. The adjusted post-test means of the inverted yogic practices, brain fitness exercises, combined training and control groups were 79.85, 80.24, 89.96 and 59.06 respectively. The obtained F-ratio for the adjusted post-test means was 831.87 and the table F-ratio was 2.77. Hence the pre-test mean F-ratio was insignificant at 0.05 level of confidence for the degree of freedom 3 and 55. This proved that there was a significant difference among the means due to the experimental trainings on critical thinking. Since significant differences were recorded, the results were subjected to post hoc analysis using Scheffe’s post hoc test. The results were presented in Table-2.

Table 2: Scheffe’s Test for the Differences between the Adjusted Post-Test Means on Critical Thinking

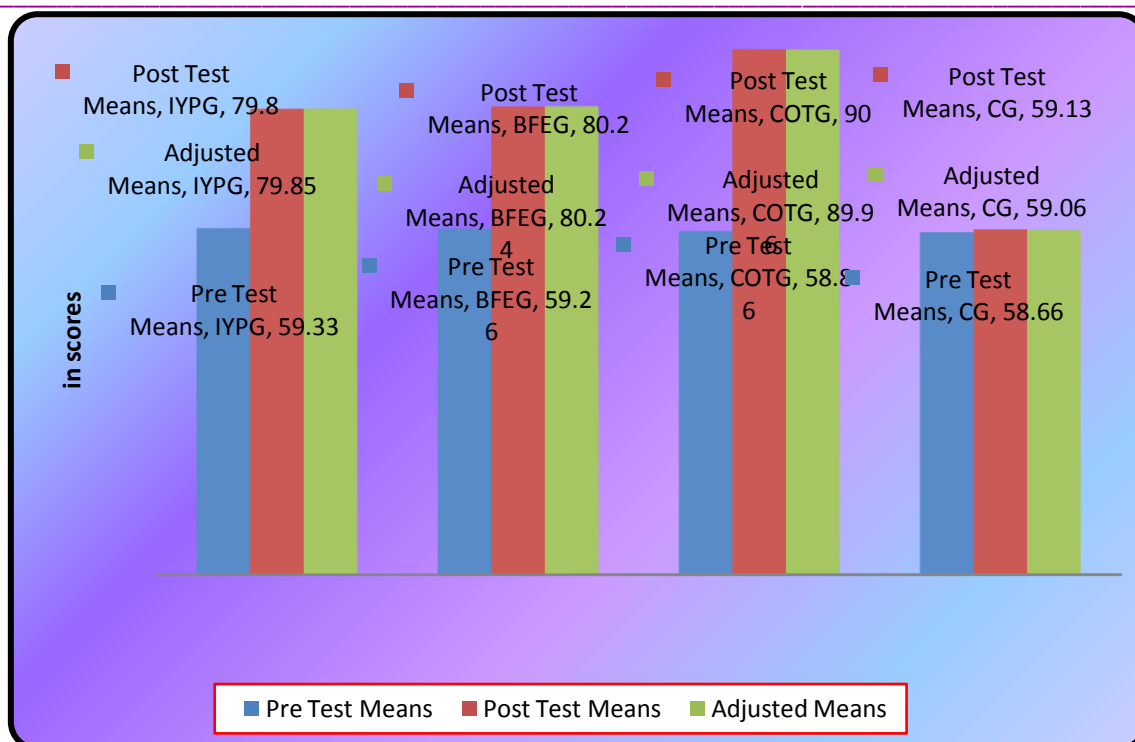
Adjusted Post-Test Means				Mean Difference	Confidence Interval
IYPG	BFEG	COTG	CG		
79.85	80.24	---	---	0.39	1.82
79.85	---	89.96	---	10.11*	
79.85	---	---	59.06	20.79*	
---	80.24	89.96	---	9.72*	
---	80.24	---	59.06	21.18*	
---	---	89.96	59.06	30.90*	

*Significant at 0.05 level

The multiple comparisons showed in Table-2 proved that there existed significant differences between the adjusted means of inverted yogic practices group and combined training group (10.11), inverted yogic practices group and control group (20.79), brain fitness exercises group and combined training group (9.72), brain fitness exercises group and control group (21.18) and combined training group and control group (30.90). There was no significant difference between inverted yogic practices group and brain fitness exercises group (0.39), at 0.05 level of confidence with the confidence interval value of 1.82.

The pre, post and adjusted means on problem solving were presented through bar diagram for better understanding of the results of this study in Figure-I.

Figure 1: Pre- Post and Adjusted Post-Test Differences of Inverted Yogic Practices Brain Fitness Exercises Combined Training and Control Groups on Critical Thinking



DISCUSSION

The results presented in Table-1 showed that obtained adjusted means on critical thinking among combined training group was 89.96 followed by brain fitness exercises group with mean value of 80.24, followed by inverted yogic practices group with mean value of 79.85 and control group with mean value of 59.06. The differences among pre-test scores, post-test scores and adjusted mean scores of the subjects were statistically treated using ANCOVA and the obtained F values were 0.78, 830.76 and 831.87 respectively. It was found that obtained F-value on pre test scores were not significant and the obtained F-values on post-test and adjusted means were significant at 0.05 level of confidence as these were greater than the required table F-value of 2.76 and 2.77. The post hoc analysis through Scheffe's Confidence test proved that due to twelve weeks training of inverted yogic practices, brain fitness exercises and combined training has improved problem solving than the control group and the differences were significant at 0.05 level. Further, the post hoc analysis showed that there was significant differences exist between the experimental groups, clearly indicating that combined training group was significantly better than inverted yogic practices group and brain fitness exercises group in improving critical thinking of the coastal area school students.

CONCLUSION

The combined training group had shown significant improvement in the critical thinking than the inverted yoga practices, brain fitness exercises group and control group.

REFERENCES

1. Andre Van Lysebeth, (1987). Yoga Self-taught. Delhi: Tarage Paper Back.
2. Eugene S. Rawles (1997). Yoga for Beauty and Health. New York: Parker Publishing Company Inc.
3. Chandrasekaran, K. (2003). Yoga for Health, Delhi; Khel Sathiya Kendra.
4. Iyengar, B.K.S. (1986). Light on Yoga. London: George Allen and Unwin Publishing Ltd.
5. Joshi, K. (2001). Yogic Pranayama. New Delhi: Orient Paper Backs.
6. Muscandar, S. (1996). Yogic Exercises. Calcutter Orient Longmans Ltd.

7. Swami Devaprasad. (1998). Yoga for integral Health and Growth. Bangalore, N.B.C.L.C.
8. Swami Kuvalayananda. (1977). Asana. Lonavala: Kaivalyadhama.
9. Swami Sivanandha (2001). Radiant Health through Yoga. The Orient Processors, Sivakashi.
10. Thirumoolar. (1962). Thirumanthram, Madras: Varthaman Publication.