

IMPACT OF YOGA, MEDITATION AND BRAIN TRAINING EXERCISES IMPROVE THE SELF CONFIDENCE OF CHESS PLAYERS

*Mr. Rajesh Gaddam, Mr. Sangappa Heggonda Ph.D Scholar
and*

*Dr. K. Sundar, Assistant Professor, Dr. M. Sundar, Principal
Alagappa University College of Physical Education
Alagappa University, Karaikudi.*

ABSTRACT

The purpose of the study was to find out the impact of yoga, meditation and brain training exercises improve the self confidence of chess players. To achieve the purpose of the present study, eighty chess players from Alagappa university affiliated colleges chess players at Tamilnadu, India, was selected as subjects at random and their ages ranged from 18 to 25 years. The subjects were divided into four equal groups. Each group consists of twenty chess players. Experimental Group I acted as Yoga Training group, Experimental Group II acted as Meditation Training Group Experimental Group III Brain Training Exercises Group 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. The study was formulated as a true random group design, consisting of a pre-test and post-test. Experimental groups underwent their respective experimental training on five days in a week for sixteen weeks. After the experimental treatment, all the eighty subjects were tested on their self confidence. 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 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. The analysis showed that there was significant differences exist between the experimental groups, clearly indicating that brain training exercises group was significantly better than yoga training group, meditation training group and control group in improving self confidence of the Alagappa university affiliated colleges inter collegiate chess players.

KEY WORDS: yoga, meditation, brain training exercises and self confidence

Introduction

Yoga is a discipline to improve or develop one's inherent power in a balanced manner. It offers the means to attain complete self-realization. The ministry of AYUSH (Nov 2003) focused attention for development of education and research in yoga. The Philosophy of Yoga is a part of 6 orthodox schools in Hinduism namely Samkhya, Yoga, Nyaya, Vaisheshika, Mimamsa & Vedanta, Yogic philosophy is most influential among other six as it conceptualizes theoretical knowledge with the systematic techniques & personal experiment. Samkhya, the foremost one, is an atheistic philosophy to approach liberation (*moksha*) while in yoga, God (*Ishvara*) plays an important role to liberate. In Yoga Sutras, Patanjali outlines an eightfold path to awareness and enlightenment called ashtanga, which literally means “eight limbs”(**Haldavnekar 2014**).

Meditation is a practice of concentrated focus upon a sound, object, visualization, the breath and movement in order to increase awareness of the present moment, reduce stress, promote relaxation, and enhance personal and spiritual growth. Mindfulness meditation techniques emphasize upon the cultivation of a receptive, choice less quality of mindful attention toward whatever arises in the sphere of our experience. It aims to use focused attention, often by using a physical sensation such as the breath, to cultivate mental calmness.

Brain fitness grew out of the study of neuropsychology and neuroscience, and is the science of maintaining and training cognitive abilities through neuroplasticity and stimulating neurogenesis, the creation of new neurons, neural connections, and brain vascularization (**Rehab hafez,2017**). Cognitive abilities like attention, stress and emotional management, memory, visual/spatial processing, auditory processes and language, motor coordination, and executive functions like planning and problem solving diminish over time unless they are used regularly.

Methodology

The purpose of the study was to find out the impact of yoga, meditation and brain training exercises improve the self confidence of chess players. The present study was eighty Chess players from Alagappa university affiliated colleges at Tamilnadu, India, were selected as subjects at random and their ages ranged from 18 to 25 years. The subjects were divided into four equal groups. Each group consists of twenty chess players. Experimental Group I acted as

Yoga Training group, Experimental Group II acted as Meditation Training Group Experimental Group III Brain Training Exercises Group and group IV acted as Control Group in this group there was not given any specific training. 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. The study was formulated as a true random group design, consisting of a pre-test and post-test. Experimental groups underwent their respective experimental training on five days in a week for sixteen weeks. After the experimental treatment, all the eighty subjects were tested on their Self Confidence through TSCI and SSCI assess of the chess players self confidence about various areas (e.g., skill execution, focusing, refocusing after errors). 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 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. The table -1 explains the ANCOVA values of experimental group and control group.

TABLE- 1
COMPUTATION OF ANALYSIS OF COVARIANCE OF YOGA
MEDITATION BRAIN TRAINING EXERCISES AND CONTROL
GROUPS ON SELF CONFIDENCE

	YTG	MTG	BTEG	CG	Source of Variance	Sum of Squares	df	Means Squares	F-ratio
Pre-Test Means	75.15	77.00	76.50	75.35	BG	47.90	3	15.96	1.37
					WG	880.10	76	11.58	
Post-Test Means	100.45	99.60	108.60	75.60	BG	12153.33	3	4051.11	472.68*
					WG	651.35	76	8.57	
Adjusted Post-Test Means	100.45	99.59	108.59	75.60	BG	11989.44	3	3996.48	460.18*
					WG	651.34	75	8.68	

BG- Between Group

WG- Within Group

Df- Degrees of Freedom

* Significant at 0.05 level

(Table Value for 0.05 Level for df 3 & 76 = 2.72)

(Table Value for 0.05 Level for df 3 & 75 = 2.72)

Results of self confidence

An examination of table 1 indicated that the pre test means of yoga, meditation, brain training exercises and control groups were 75.15, 77.00, 76.50 and 75.35 respectively. The obtained F-ratio for the pre-test was 1.37 and the table F-ratio was 2.72. Hence the pre-test mean F-ratio was insignificant at 0.05 level of confidence for the degree of freedom 3 and 76. 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 yoga, meditation, brain training exercises and control groups were 100.45, 99.60, 108.60 and 75.60 respectively. The obtained F-ratio for the post-test was 472.68 and the table F-ratio was 2.72. Hence the post-test mean F-ratio was significant at 0.05 level of confidence for the degree of freedom 3 and 76. This proved that the differences between the post-test means of the subjects were significant. The adjusted post-test means of the yoga, meditation, brain training exercises and control groups were 100.45, 99.59, 108.59 and 75.60 respectively. The obtained F-ratio for the adjusted post-test means was 460.18 and the table F-ratio was 2.72. Hence the adjusted post-test mean F-ratio was significant at 0.05 level of confidence for the degree of freedom 3 and 75. This proved that there was a significant difference among the means due to the experimental trainings on Self Confidence. Since significant differences were recorded, the results were subjected to post hoc analysis using Scheffe's post hoc test. The results were presented in Table2.

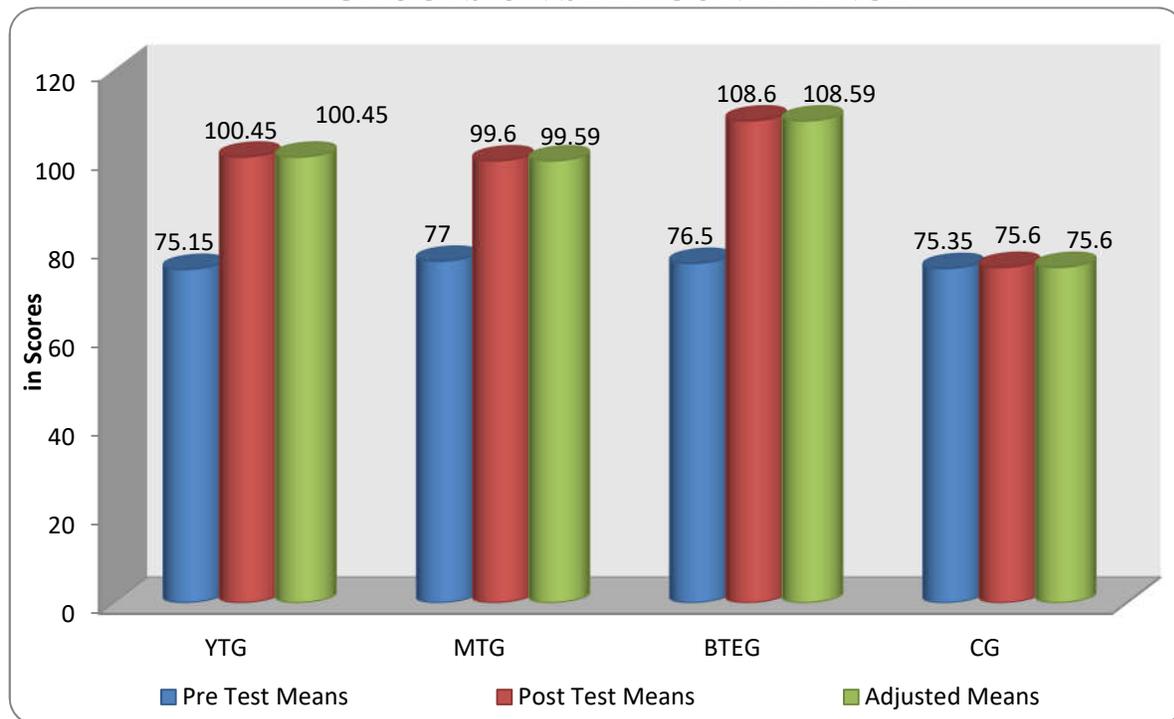
TABLE 2
THE SCHEFFE'S TEST FOR THE DIFFERENCES BETWEEN THE ADJUSTED POST-TEST MEANS ON SELF CONFIDENCE

Adjusted Post-Test Means				Mean Difference	Confidence Interval
YTG	MTG	BTEG	CG		
100.45	99.60	---	---	0.85*	2.66
100.45	---	108.60	---	8.15*	
100.45	---	---	75.60	24.85*	
---	99.60	108.60	---	9.00*	
---	99.60	---	75.60	24.00*	
---	---	108.60	75.60	33.00*	

* Significant at 0.05 level

The multiple comparisons showed in Table 2 proved that there existed significant differences between the adjusted means of yoga training group and brain training exercises group (8.15), yoga training group and control group (24.85), meditation training group and brain training exercises group (9.00), meditation training group and control group (24.00), brain training exercises group and control group (33.00). There was no significant difference between yoga training group and meditation training group (0.85) at 0.05 level of confidence with the confidence interval value of 2.66. The pre, post and adjusted means on Self Confidence were presented through bar diagram for better understanding of the results of this study in Figure 1

FIGURE -1
PRE POST AND ADJUSTED POST-TEST DIFFERENCES OF YOGA
MEDITATION BRAIN TRAINING EXERCISES AND CONTROL
GROUPS ON SELF CONFIDENCE



Discussion on self confidence

The results presented in table 2 showed that obtained adjusted means on Self Confidence among brain training exercises group was 108.60 followed by yoga training group with mean value of 100.45, followed by meditation training group with the mean value of 99.60 and control group with mean value of 75.60. 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 1.37, 472.68 and 460.18 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 2.72 and 2.72. The post hoc analysis through Scheffe's Confidence test proved that due to sixteen weeks training of yoga training, meditation training and brain training exercises groups has improved Self Confidence 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 brain training exercises group was significantly better than yoga training group, meditation training group and control group in improving self confidence of the tribal school students.

Conclusion

- ❖ As stated at the outset, this study is an attempt to 'deconstruct' the impact of yoga, meditation and brain training exercises on self confidence of college level chess players.
- ❖ The training group exhibited substantive improvement in self confidence.
- ❖ The study proves beyond any reasonable doubt that yoga, meditation and brain training exercises did have a significant impact on self confidence.
- ❖ Finally The brain training exercises group exhibited substantive improvement on self confidence than the other three groups.

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