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Effect of asana and meditation on selected bio-chemical variables among high school students

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Abstract

Purpose: The present study was designed to find out the effect of asana and Meditation on selected Bio-chemical variables among high school students.

Subjects: For this purpose forty five (N=45) boys students studying around Mysore, Karnataka State, India, during the year 2018-2019 were selected as subjects. The subjects were divided at random equally into three groups of fifteen each (n=15).

Training Protocol: Group-I underwent Asana Practices, Group-II underwent Meditation Practices, and Group-III acted as Control. The duration of the training period for all the three Experimental groups was restricted to twelve weeks and the number of sessions per week was confined to three in a week.

Variables: The dependent variable selected for this study was Total Cholesterol (TC) and it was assessed through Blood samples test (Calorimetric Method).

Statistical Procedure: All the subjects were tested prior to and immediately after the training for all the selected variables. Data were collected and statistically analyzed using ANCOVA. Scheffe's post hoc test was applied to determine the significant difference between the paired means. In all the cases 0.05 level of significance was fixed.

Results: The results of the study showed that there was a significant difference was found among all the Experimental groups namely Asana Practices programme group and Meditation Practices programme in decrease Total Cholesterol (TC). When the Experimental groups were compared with each other, the Asana Practices programme was found to be greater than the Meditation Practices programmes on the decrease of Total Cholesterol (TC).

Keywords: Asana practices, meditation practices, total cholesterol (TC)

Introduction

Yoga is a very ancient discipline. It is recognized as one of the most important and valuable heritage of India. Today the whole world is looking to yoga as the solution to various problems modern man is facing. Yoga is an art of living and yogasana is a scientific procedure. This is the only practice which has an effect on the human body. Yoga develops the personality of an individual.

Yoga is universal benefitting people of all ages. The study of yoga is fascinating those with a philosophical mind and is defined as the "Silencing of the mind's activities which leads to complete realization of the intrinsic nature of the supreme being" (Guru Nanak, 1973).

Yoga provides linkage between body, mind and soul. Yoga starts from cleanliness of the body and mental thought process, word and action of a man. Yoga makes the mind to go deep into the subconscious level and purifies even the accumulated evil thoughts. The yoga is divided into four main groups namely Bakthi yoga. Karma Yoga, Raja Yoga and Gnana Yoga. Among these, Bakthi yoga and Karma Yoga are practiced by persons who have the natural gift by birth. Gnana yoga is practiced by highly gifted persons in their matured life. Raja yoga is the technique that can be practiced by all normal human beings. It was formulated stage wise by Patanjali yogi, who is said to be the father of Raja Yoga.

Meditation is the practice of turning your attention to a single point of reference. It can involve focusing on the breath, on bodily sensations, or on a word or phrase known as a mantra. In other words, meditation means turning your attention away from distracting thoughts and focusing on the present moment. Meditation is a conscious mental process that induces a set of integrated physiological changes termed the relaxation response.

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The regulation of attention is a central feature of different methods of meditation.³ Meditation itself may involve efferent attenuation, sensory attenuation, and nonanalytic attention (Davidson, 1977).

Methodology

The purpose of the study is to find out the effect of asana and Meditation on selected Bio-chemical variables among high school students. To achieve the purpose forty five (N=45) boys students studying around Mysore, Karnataka State, India, during the year 2018-2019 were selected as subjects. The selected subjects were divided into three equal groups of fifteen such as Asana Practices group, Meditation Practices group and Control group. Group-I underwent Asana Practices, group-II Meditation Practices for three days per week for twelve weeks, group-III acted as Control. Among various Bio-chemical variables Total Cholesterol (TC) only selected for this study and it was assessed through Blood samples test

(Calorimetric Method). All the subjects of the three groups were tested on selected criterion variables at prior to and immediately after the training programme.

Analysis of the Data

The data collected from the Experimental groups and control group on prior and after experimentation on selected variables were statistically examined by analysis of covariance (ANCOVA) was used to determine differences, if any among the adjusted post test means on selected criterion variables separately. Whenever they obtained f-ratio value in the simple effect was significant the Scheffe’s test was applied as post hoc test to determine the paired mean differences, if any. In all the cases 0.05 level of significance was fixed.

The Analysis of covariance (ANCOVA) on Total Cholesterol (TC) of Experimental Groups and Control group have been analyzed and presented in Table -1.

Table 1: Values of analysis of covariance for experimental groups on total cholesterol (TC)

Adjusted Post Test Means			Source of Variance	Sum of Squares	df	Mean Squares	‘F’ Ratio
Asana Practices Group – (I)	Meditation Practices Group – (II)	Control Group – (III)					
173.12	186.29	187.22	Between	1261.55	2	630.77	198.98*
			With in	130.08	41	3.17	

* Significant at. 0.05 level of confidence (Total Cholesterol (TC) Scores in mg/dL) (The Table value required for Significance at 0.05 level with df 2 and 41 is 3.23)

Table- 1 shows that the adjusted post test mean value of Total Cholesterol (TC) for Asana Practices group, Meditation Practices group, and Control group is 173.12, 186.29 and 187.22 respectively. The obtained F-ratio of 198.98 for the adjusted post test mean is more than the table value of 3.23 for df 2 and 41 required for significance at 0.05 level of confidence.

The results of the study indicate that there are significant differences among the adjusted post test means of Experimental groups on the decrease of Total Cholesterol (TC).

To determine which of the paired means had a significant difference, Scheffe’s test was applied as Post hoc test and the results are presented in Table-2.

Table 2: The Scheffe’s test for the differences between the adjusted post tests paired means on total cholesterol (TC)

Adjusted Post Test Mean			Mean Difference	Confident Interval Value
Asana Practices Group – (I)	Meditation Practices Group – (II)	Control Group – (III)		
173.12	186.29	---	13.17*	0.89
173.12	---	187.22	14.10*	
---	186.29	187.22	0.93*	

* Significant at.05 level of confidence

Table - 2 shows that the adjusted post test means differences on Asana Practices group and Meditation Practices group, Asana Practices group and Control group and Meditation Practices group and Control group, are 13.17, 14.10 and 0.93 respectively and they are greater than the confidence interval value 0.89, which shows significant differences at 0.05 level of confidence.

The results of the study further have revealed that there is a significant difference in Total Cholesterol (TC) between the adjusted post test means of Asana Practices group and Meditation Practices group, Asana Practices group and Control group and Meditation Practices group and Control group.

However, the improvement in Total Cholesterol (TC) was significantly higher for Asana Practices group than Meditation Practices group and Control group. It may be concluded that the Asana Practices group has exhibited better than the Meditation Practices group and Control group in decreasing Total Cholesterol (TC).

The adjusted post test mean values of Asana Practices group,

Meditation Practices group and Control group on Total Cholesterol (TC) are graphically represented in the Figure -1.

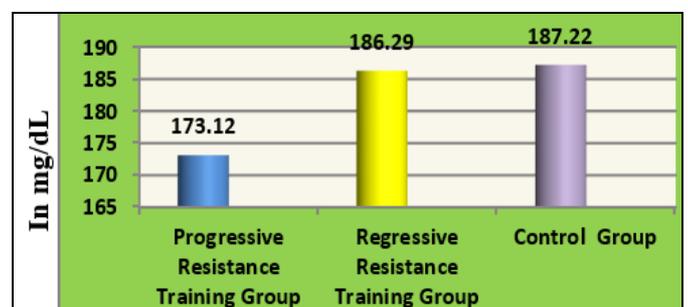


Fig 1: The adjusted post test mean values of asana practices group, meditation practices group and control group on total cholesterol (TC)

Conclusion

From the analysis of the data, the following conclusions were drawn.

1. The experimental groups such as Asana Practices and Meditation Practices had registered significant improvement on the selected Bio-chemical components namely Total Cholesterol (TC).
2. When the Experimental groups were compared with each other, the Asana Practices group was found to be greater than the Meditation Practices group on the decrease of selected criterion variable namely Total Cholesterol (TC).

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