



## A SCIENTIFIC EFFECT OF ASHTANGA YOGA ON CARDIOVASCULAR ENDURANCE AMONG COLLEGE MEN

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**ABSTRACT** The purpose of the present study was to investigate a scientific effect of Ashtanga yoga on cardiovascular endurance among college men. To achieve the purpose of the study thirty college students were selected from Alagappa University Model Constitute College of Arts and Science, Paramakudi, Sivaganga, Tamilnadu, India during the year 2019. The subject's age ranges from 18 to 25 years. The selected students were divided into two equal groups consists of 15 men students each namely experimental group and control group. The experimental group underwent an Ashtanga Yoga programme for six weeks. The control group was not taking part in any training during the course of the study. Cardiovascular endurance was taken as criterion variable in this study. The selected subjects were tested on Cardiovascular endurance was measured through Cooper's 12 Minute Run / Walk test. Pre-test was taken before the training period and post-test was measured immediately after the six week training period. Statistical Technique 't' ratio was used to analyse the means of the pre-test and post test data of experimental group and control group. The results revealed that there was a significant difference found on the criterion variable. The difference is found due to Ashtanga Yoga given to the experimental group on cardiovascular endurance when compared to control group.

**KEYWORDS :** Ashtanga Yoga, Cardiovascular endurance and 't' ratio.

### INTRODUCTION

Today, sports have become a part and parcel of our culture. It is being influenced and does influence all our social institutions including education, economics, arts, politics, law, mass communication and even international diplomacy (Alaguraja, K. et.al, 2019)<sup>4</sup>. Yoga is a system of exercises which helps the mind and body in order to achieve tranquillity and spiritual insight (Alaguraja, K. et.al, 2019)<sup>5</sup>. Make sure that when you practice yoga asanas, you don't just stretch the body because the mind has to be with the body. (Alaguraja, K. et.al, 2019)<sup>8</sup>.

Yoga is universally benefiting all people of all ages. The study of Yoga is fascinating to those with a philosophical mind and is defined as the silencing of the mind's activities which lead to complete realization of the intrinsic nature of the Supreme Being (Alaguraja, K. et.al., 2017)<sup>1</sup>. In the sports world, physical education is the most essential aspect due to the fact physical schooling increases the performance and the effectiveness of the sports (Alaguraja, K. et.al., 2018)<sup>2</sup>. One can start practicing Yoga at any given moment of time and you may start with meditation or directly with pranayama without even doing the asanas (postures). (Alaguraja, K. et.al, 2019)<sup>3</sup>. Today's there is an escalating emphasis on appearing smarter, feeling better and living longer. In order to achieve these ideals as, scientific evidence tells us that one of the keys is high fitness and exercises (Alaguraja, K. et.al, 2019)<sup>7</sup>. When consciousness is operating with the intellect and with all the senses, by making an individual think that he or she is awake and aware, but the mind is actually less receptive and more critical (Yoga, P. et. al., 2019)<sup>9</sup>.

### METHODOLOGY

#### STATEMENT OF THE PROBLEM

The purpose of the study was to find out the scientific effect of Ashtanga yoga on cardiovascular endurance among college men.

#### SELECTION OF THE SUBJECTS

To achieve this purpose of the study, thirty college men students were selected as subjects at random. The age of the subjects were ranged from 18 to 25 years.

#### EXPERIMENTAL DESIGN

The selected subjects were divided into two equal groups of fifteen subjects each, such as Ashtanga Yoga group (Experimental Group) and control group. The experimental group underwent Ashtanga Yoga for three days per week for six weeks. Control group, which they did not undergo any special training programme apart from their regular physical activities as per their curriculum. The following physiological variable, namely cardiovascular endurance was selected as criterion variable. All the subjects of two groups were tested on selected criterion variable cardiovascular endurance was measured through Cardiovascular endurance was measured through Cooper's 12 Minute Run / Walk test at prior to and immediately after the training

programme.

#### STATISTICAL TOOL

The 't' test was used to analysis the significant differences, if any, in between the groups respectively. The 0.05 level of confidence was fixed to test the level of significance which was considered as an appropriate.

#### ANALYSIS OF THE DATA

The significance of the difference among the means of the experimental group was found out by pre-test. The data were analysed and dependent 't' test was used with 0.05 levels as confidence.

**Table I**  
Analysis of t-ratio for the Pre and Post Tests of Experimental and Control Group on Cardiovascular endurance (Scores in meters)

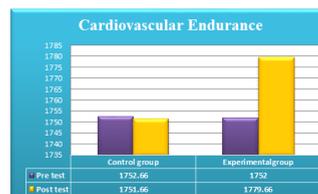
Variables	Group	Mean		SD		Sd Error		df	t'ratio
		Pre	Post	Pre	Post	Pre	Post		
Cardiovascular Endurance	Control	1752.66	1751.66	58.85	60.01	15.91	15.50	14	0.56
	Experimental	1752.00	1779.66	50.02	55.27	12.92	14.27		12.13*

\*Significance at .05 level of confidence.

The Table-I shows that the mean values of pre-test and post-test of the control group on Cardiovascular endurance were 1752.66 and 1751.66 respectively. The obtained 't' ratio was 0.56, since the obtained 't' ratio was less than the required table value of 2.14 for the significant at 0.05 level with 14 degrees of freedom it was found to be statistically insignificant. The mean values of pre-test and post-test of the experimental group on cardiovascular endurance were 1752.00 and 1779.66 respectively. The obtained 't' ratio was 12.13\* since the obtained 't' ratio was greater than the required table value of 2.14 for significance at 0.05 level with 14 degrees of freedom it was found to be statistically significant. The result of the study showed that there was a significant difference between control group and experimental group in cardiovascular endurance. It may be concluded from the result of the study that experimental group improved in cardiovascular endurance due to six weeks of Ashtanga Yoga.

#### Figure-1

Bar diagram showing the pre and post mean values of experimental and control group on Cardiovascular Endurance (Scores in meters)



**DISCUSSIONS ON FINDINGS**

The result of the study indicates that the experimental group, namely Ashtanga Yoga group had significantly improved the selected dependent variable, namely cardiovascular endurance, when compared to the control group. It is also found that the improvement caused by Ashtanga Yoga when compared to the control group.

**CONCLUSIONS**

1. There was a significant difference between experimental and control group on cardiovascular endurance after the training period.
2. There was a significant improvement in cardiovascular endurance. However the improvement was in favour of experimental group due to six weeks of Ashtanga Yoga.

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