



Effect of Yogic Training on BMI and VO₂ Max in College Men of Tamil Nadu

Dr.S.DHARAKESWARI

Assistant Professor

Physical Education Health Education Sports

A.V.V.M Sri Pushpam college(Autonomous) Poondi

Thanjavur

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ABSTRACT

The purpose of this study was to find out the efficacy of yogic training on BMI and V02 Max, of college men. To achieve this purpose forty college men from Amrita Vishwa Vidyapeetham Coimbatore Tamilnadu were selected as subjects and their age ranged from 17 to 22 years. They were divided into two groups of twenty each, group I underwent Yogic Training (ATG), and group II was considered as Control Group (CG) that did not participate in any special training apart from their regular routine activities. Yogic training was given to the experimental group for the period of twelve weeks and five days per week. The pre and post- tests were conducted before and after the training for twelve weeks. The obtained data were statistically analysed by paired't' test to find out the significant difference. The finding of this study reveals that the yogic training influenced the BMI and VO₂ Max variables of college men.

Keywords: Yogic training, BMI, V02 Max.

INTRODUCTION

Yoga is a practical aid, not a religion. Yoga is an ancient art based on a harmonizing system of development for the body, mind, and spirit. The continued practice of yoga will lead you to a sense of peace and well-being, and also a feeling of being at one with their environment.

Yoga postures are the physical positions that co-ordinate breath with movement and withholding the position to stretch and strengthen different parts of body. Yogic exercises are the ideal complement to other forms of physical exercises such as running, cycling and swimming. Yogic postures systematically work on all the major muscle groups, including the back, neck and shoulders, deep abdominal, hip and ankles, feet, wrists and hands. By their very nature, yogic exercises affect all the muscle groups and organs as they simultaneously impart strength, increase flexibility and bring nourishment to internal organs. Although most poses are not aerobic in nature, they do in fact send oxygen to the cell by way of conscious deep breathing and sustained stretching and contraction of different muscle groups. Yoga can help to check any imbalance in muscular development and will enable both mind and body to function efficiently.

Yoga exercises and breathing exercises, unlike physical exercises, do not strain the cardio vascular system, and they improve physical fitness and endurance. Physical exercises are repetitive movements, whereas yoga exercises involve very little movement and are only postures which are to be maintained for a specific period of time. Yogic exercises tone up both the body and the mind whereas physical exercise affects mainly the body. Postures involve concentration on certain parts of the body and result is a toning up of both the mind and the body. The caloric requirement in yogic asanas varies from 0.8 to 3 calories per minute while the caloric requirement of a physical exercise varies from 3 to 20 calories per minute.

The main purpose of physical exercise is to increase the circulation of the blood and the intake of oxygen. This can be done by yoga's simple movement of the spine and various joints of the body with deep breathing but without violent movements of the muscle. On doing yoga exercises of the twist movements and asanas, the various blood vessels are pulled and stretched and blood is equally distributed to every part of the body. The stretched muscles and ligaments during the yoga practices are immediately relaxed and they carry more energy to the muscle fibre. So, more energy flows into the relaxed muscles.

Yogic exercise aims at both prevention and treatment of various diseases. Breathing exercises like Pranayama, including Kapalabhati, is very effective for keeping the lungs healthy and prevent lung infections. With yoga deep breathing air circulates to every part of lungs, whereas with most other physical exercises there is mainly an increase in respiratory rate. Physical exercise should not be started without a thorough physical examination and making certain the exercise to be undertaken would not do any harm. Yogic postures are generally mild and one is less likely to get into compilation, but physical exercise, especially the type known as jogging, which is most popular in the western world today, should never be undertaken unless the individual is fully evaluated by his physician. The physician should look for signs and symptoms and take an electro cardiogram at rest and after exercise to detect an overt or subclinical heart disease.

METHODOLOGY

To achieve the purpose of the study forty (40) male college students were selected as subjects from Amrita Vishwa Vidyapeetham, Coimbatore, Tamilnadu. The variables selected for the study are BMI and V02 Max. They were measured by using the BMI, V0₂ Max formula (BMI = Weight in Kg/Height in meters²) and 12 minutes run / walk test on Treadmill - motus 900 series model, formula (Distance covered in meters -504.9) / 44.73. Their age was ranged between 17-22 years. They were randomly divided into two groups of each twenty. The segmented group were named as yogic training group N = 20 (YTG) and control group N = 20 (CG). Treatment was given for twelve weeks, five days a week and a session on each day to the experimental group. The control group was not given any kind of treatment. The pre and post- tests were conducted before and after the training for twelve weeks. The obtained data were statistically analysed by paired ‘t’ test to find out the significant difference.

ANALYSIS OF DATA AND RESULTS OF THE STUDY

TABLE-I

COMPUTATION OF ‘T’-RATIO BETWEEN THE PRE AND POST TESTS ON BMI OF EXPERIMENTAL AND CONTROL GROUPS

Group	Test	M	SD	σ DM	DM	t-ratio
Experimental	Pre Test	25.72	1.60	0.19	2.20	11.83*

	Post Test	23.52	1.46			
Control	Pre Test	23.87	2.98	0.05	-0.06	1.20
	Post Test	23.93	2.96			

* significance at 0.05 level.

The table I indicates that there was a significant reduction in BMI through the specific yogic training. It reveals that the obtained t-ratio 11.83 is greater than the required table t-ratio of 2.09 at 0.05 level of confidence. So there was a significant reduction on BMI between pre and posttests of experimental group. But control group showed no significant reduction in BMI, since the obtained t-ratio 1.20 was lesser than the required table t-ratio of 2.09. Hence the results indicated that the significant reduction in BMI was due to the specific yogic training alone.

FIGURE – I

THE FIGURE SHOWING THE MEAN DIFFERENCE OF PRE AND POST-TESTS SCORES ON BMI OF EXPERIMENTAL AND CONTROL GROUPS

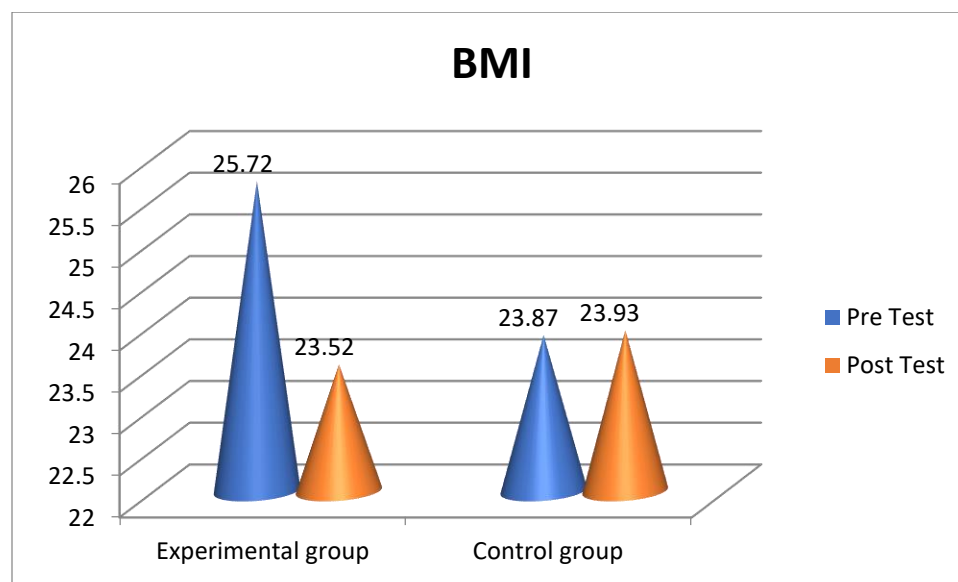


TABLE-II

COMPUTATION OF ‘T’-RATIO BETWEEN THE PRE AND POST TESTS ON VO₂ MAX OF EXPERIMENTAL AND CONTROL GROUPS

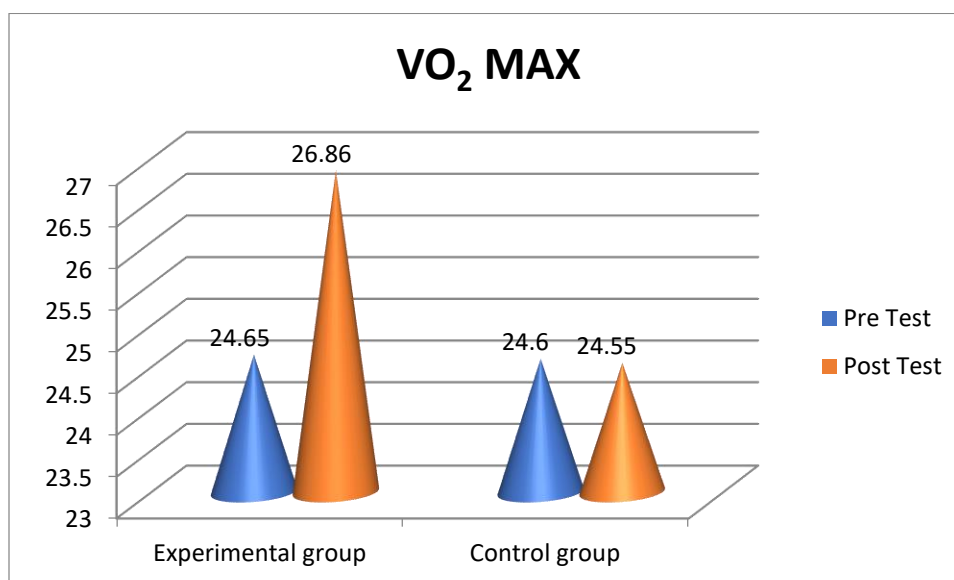
Group	Test	M	SD	σ DM	DM	t-ratio
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Experimental	Pre Test	24.65	1.27	0.19	-2.21	11.70*
	Post Test	26.86	1.12			
Control	Pre Test	24.60	1.23	0.15	0.05	0.32
	Post Test	24.55	1.40			

* significance at 0.05 level.

The table II indicates that there was a significant improvement in VO₂ Max through the specific yogic training. It reveals that the obtained t-ratio 11.70 is greater than the required table t-ratio of 2.09 at 0.05 level of confidence. So there was a significant reduction on VO₂ Max between pre and posttests of experimental group. But control group showed no significant improvement in VO₂ Max, since the obtained t-ratio 0.32 is lesser than the required table t-ratio of 2.09. Hence the significant improvement in VO₂ Max is due to the specific yogic training alone.

FIGURE – II
THE FIGURE SHOWING THE MEAN DIFFERENCE OF PRE AND POST-TESTS
SCORES OF VO₂ MAX OF EXPERIMENTAL AND CONTROL GROUPS



DISCUSSION OF FINDINGS

The study reveals that the eight weeks yogic training programme on the selected dependent variables namely BMI and VO₂ Max significantly improved by means of yogic training. In the control group there were no changes because they were not given any special training. Subjects chosen for the experimental study was not given any physical exercise other than the treatment, thus it was concluded that any improvement on the selected variables was on the account of treatment given. The result of this investigations showed that there was a significant improvement on BMI and VO₂ Max between pre and posttests of experimental group as a result of 8 weeks specific yogic training.

CONCLUSIONS

There was a significant reduction on BMI and significant improvement on VO₂ Max between pre and post tests of experimental group as a result of 8 weeks of specific yogic training programme.

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