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Relative effect of hatha yoga and aerobic training on high density lipotein variables among endomorphy type boys

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Abstract

The main purpose of the present study was to find out the relative effect of hatha yoga and aerobic training on High Density Lipoprotein variables among endomorphy type boys. To achieve the purpose of the study, 45 boys will be selected at random from in and around Tirunelveli, Tamil Nadu, India. There were age of the subjects are ranged between 13-17 year. The Selected subjects were divided into three equal groups as follows Hatha Yoga Group (HYG) underwent practice yoga, Aerobic Training Group (ATG) underwent aerobic training and Control Group (CG) did not participate any training. The hatha Yoga group consists of 15 subjects who undergone the practice of Asanas and Pranayama. The Aerobic group consists of 15 subjects who undergone rhythmic Aerobic exercises. A qualification criterion for the experimental group was some participation in school level sports and games in order to sustain the training process. The post--tests were conducted on the above said dependent variables after a period fourteen weeks. The difference between the pre-test and post-test was considered the effect of respective experimental practice. To test the statistical significance ANCOVA was used. In all cases 0.05 levels was fixed to test the hypothesis.

Keywords: Hatha yoga and aerobic training, high density lipoprotein

Introduction

Hatha Yoga originate in India is the sciences. Nowadays, hatha yoga individual a subject of wide-ranging happiness has gain universal status. It can serve as an applied science in a number of fields such as education, physical education exercise physiology and sports. Hatha yoga is physical discipline. Hatha yoga is an Indian philosophical and holy institution regulation intended to bring balance and health to the physical, mental, emotional, and spiritual dimension of the individual.

Hatha Yoga training fundamentally consists of posture-a particular position of the body which contributes to steadiness of body and mind, Pranayama is control the breathing in a superior and extra-ordinary way and meditation. It produces dependable bio-chemical changes and have sound scientific basis. Effect of yogic practices on respiratory function has been a significant area of research for decades. Practicing yoga, in adding together to its contribution in the improvement of pulmonary ventilation and gas exchange, helps in the prevention, cure and rehabilitation of many respiratory illnesses by success better ventilatory function. The studies with Hatha Yoga are timely and scientifically important since it would be an attractive tool against the aforementioned unhealthy lifestyle. It could benefit both healthy and unhealthy adults. Thus, the aim of the present study was evaluate the effects of a 12-week systematized yoga intervention on health-related physical fitness. It was hypothesized that the systematized intervention of Hatha Yoga is sufficient to improve health-related physical fitness components.

Materials and Method

The main purpose of the present study was to find out the relative effect of hatha yoga and aerobic training on respiratory endurance variables among endomorphy type boys. To achieve the purpose of the study, 45 boys will be selected at random from in and around Tirunelveli, Tamil Nadu, India. There were age of the subjects are ranged between 13-17 year. The Selected subjects were divided into three equal groups as follows Hatha Yoga Group (HYG)

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underwent practice yoga, Aerobic Training Group (ATG) underwent aerobic training and Control Group (CG) did not participate any training. The hatha Yoga group consists of 15 subjects who undergone the practice of Asanas and Pranayama. The Aerobic group consists of 15 subjects who undergone rhythmic Aerobic exercises. A qualification criterion for the experimental group was some participation in school level sports and games in order to sustain the training process. Measures: The dimensions are performing during one week prior to and one week after the 14-week hatha yoga intercession. The tests were done under measure of laboratory conditions after familiarizing the subjects with the testing procedures. Collecting data included age, gender, height, body mass, and body composition, the High density lipoprotein (HDL) was calculated using the standardized formula high density lipoprotein laboratory.

Statistical Procedure

In order to investigate the Relative effect of each training method i.e. Aerobic training and Hatha yoga training, on respiratory endurance among two experimental groups and one control group of the college male students undertaken on this study, the analysis of co-variance statistics was applied. In case of existence of significant, the post-hoc test was applied in order to investigate the existence significant differences if any, among three experimental groups namely aerobic training, hatha yoga training and one control group of school boys. The significant level was set at 0.05 level of confidence.

Results

Analysis of covariance for the pretest and post test data on high density lipotein HDL-C scores of aerobic exercise hatha yoga practices and control groups

Tests/Groups		AEG	HYPG	CG	SOV	Sum of Squares	df	Mean Squares	“F” Ratio
Pre Test	\bar{X}	35.0667	33.7727	34.1907	B	13.083	2	6.541	1.968
	σ	1.94447	1.67798	1.83669	W	139.580	42	3.323	
Post Test	\bar{X}	36.7493	34.9293	33.7340	B	69.167	2	34.584	12.179*
	σ	1.74110	1.77603	1.52746	W	119.264	42	2.840	
Adjusted Post Test	\bar{X}	36.124	35.423	33.866	B	39.248	2	19.624	53.975*
					W	14.907	41	0.364	

* $F_{(0.05)}(2, 42 \text{ and } 2, 41) = 3.22$

*Significant at 0.05 level of confidence

The table shows that the pre-test means in HDL-C of AEG, HYPG and CG are 35.0667, 33.7727 and 34.1907 respectively. It resulted in an “F” ratio of 1.968, which indicates statistically no significant difference between the pre-test means at 0.05 level of confidence. The post-test means of HDL-C of AEG, HYPG and CG are 36.7493, 34.9293 and 33.7340 respectively. It resulted in an “F” ratio of 12.179, which points out statistically significant difference between the post-test means at 0.05 level of confidence. The adjusted post-test means of HDL-C of AEG, HYPG and CG are 36.124, 35.423 and 33.866 respectively. The obtained F-ratio value was 53.975, which was higher than the table value 3.22 with df 2 and 41 required for significance at 0.05 level. It demonstrates that there was a significant difference among the adjusted post-test means of HDL-C of AEG, HYPG and CG. The Scheffe’s Post-Hoc test is applied to find out the paired means which has a significant difference and the results are presented in table.

Table 1: Scheffe’s test for differences of the adjusted post-test paired means of HDL-C

Adjusted Post-Test Means			Mean Differences	Confidence Interval
AEG	HYPG	CG		
36.124	35.423	-	2.27	0.36
-	35.423	33.866	1.56	
36.124	-	33.866	2.26	

* Significant at 0.05 level.

The table shows that the adjusted post-test mean difference in HDL-C between AEG and HYPG, AEG and CG, and HYPG and CG are 2.27, 1.56 and 2.26, respectively which were statistically significant at 0.05 level of confidence. It is found that there is a significant difference on HDL-C among the groups. However, physical exercise group is to be found better in increasing the level of HDL-C in blood than HYPG. The pre-test, post-test and adjusted post-test mean values of AEG, HYPG and CG on HDL-C are graphically presented.

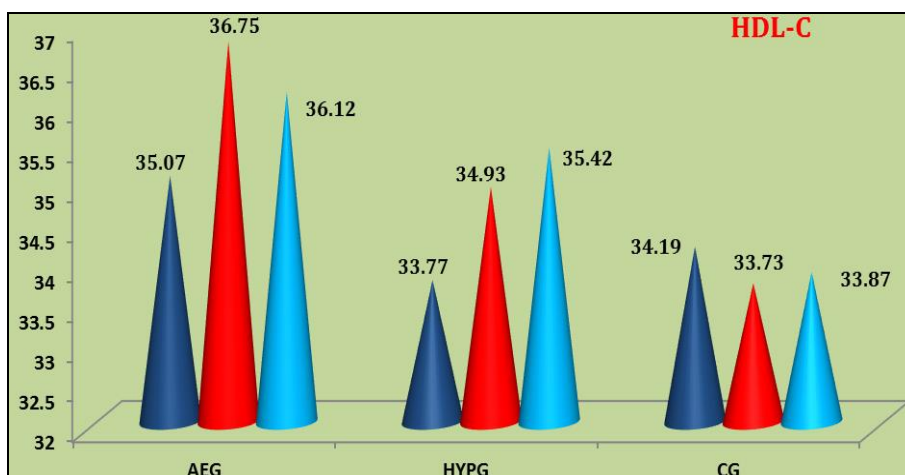


Fig 1: Mean Scores of Pre, Post Tests and Adjusted Post Test of AEG, HYPG and CG on HDL-C.

Conclusions

In the present investigation, as a result of two training programmes the following improvements occurred on High Density Lipoprotein, of endomorph type. The Regular practice of aerobic exercises and hatha yoga practices significantly reduced the level of High Density Lipoprotein.

Reference

1. Ramesh V, Subramaniam PK. Effect yogic Pranayama and meditation on selected physical and physiological variables in adolescents, yoga mimamsa. 2010; XLII(3):187-193.
2. Ramesh V, Subramaniam PK. Effect of Aerobic and Calisthenics Exercise on Health Related Physical Fitness Variables of Obese Adolescence, Indian Journal for Research in Physical Education and Sports Sciences, 2011.
3. Ramesh V, Subramaniam PK. Effect of Physical Activity and Aerobic Fitness on Health Related Physical Fitness Variables of Overweight and Obese Adolescence, Indian Journal of Yoga Exercise & Sport Science and Physical Education. 2010, 46-52.
4. Ramesh V, Subramaniam PK. Effect of Physical Exercise Training at Different Intensities on Bmi, Basal Metabolic Rate and Body Fat Percentage of Obese Adolescence, Entire Research National Quarterly Research Journal. 2011; 3(1):20-25.
5. Kumudlata Singh, Sanjit Sardar. Effect of selected yogic Practices and Physical exercises on Bio-Chemical variables among college women Students, International Journal of Physical Education, Sports and Health. 2015; 1(6):161-163.
6. Karthikeyan J. Effect of Yoga and Aerobic Training on Bio Chemical Variables in Middle Aged Diabetic Patients, International Journal of Science Culture and Sport (Int JSCS). 2015; 3(2):13-20.
7. Agro RA. Effect of Low Impact and High Impact Aerobic Dance Exercise on Selected Fitness Measures, Completed Research in Health Physical Education and Recreation. 1988; II:30.
8. Amarnath, Thulasimala. Role of Yoga in improving Health Related Physical Fitness of School Children, International Journal of Health, Physical Education and Computer Science in Sports. 2014; 15(1):520-521.
9. Ganguly. Effect of short test yogic training programme on cardiovascular endurance, SNIPES Journal. 1981; 4:2.
10. Govindharajulu E, Gnanadeepam, Bera. Effect of Yoga Practices on Flexibility and Cardio Respiratory Endurance on High Schools Girls, Yoga Mimamsa, 2003, XXXV.
11. Satya Sridevi Datla, Syed Karimulla. Effect of Yogic practices and Interval Training on selected Physiological and Bio-Chemical Variables among High School Boys, Asian Journal of Physical Education and Computer Science in Sports. 2011; 5(1):83-85.