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ORIGINAL ARTICLE

EFFECT OF YOGIC EXERCISE WITH AEROBIC EXERCISE ON SELECTED MINIMUM MUSCULAR FITNESS AMONG HIGH SCHOOL BOYS

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Abstract:

The purpose of the study was to find out the effect of yogic exercise with aerobic exercise on selected minimum muscular fitness among high school boys. To achieve this purpose thirty students (N-30) randomly were selected from government high school, Thondamuthur, Coimbatore. The age of the subjects was under-14 only. The subjects were divided into two equal groups namely the group one was considered as experimental group and group two was considered as control group. The experimental group was given six weeks yogic exercise with aerobic exercise and control group did not underwent any training. The minimum muscular fitness variable was selected as criterion variables namely Abdominal plus, Abdominal minus, Psoas & lower Abdomen. Pre and post test data recorded in the regular units. The pre and posttest were analyzed with't' ratio.The result of the studyreveals that there was significant improvement on selected minimum muscular fitness of high school boys due to six weeks of yogic exercises with aerobic exercise.

KEYWORDS:

Abdominal plus, Abdominal minus, Psoas & lower Abdomen.

INTRODUCTION

YOGA

Yoga is the physical, mental, and spiritual practices or disciplines which originated in ancient India with a view to attain a state of permanent peace (Bryant, 2009). The term yoga can be derived from either of two roots, yujir yoga (to yoke) or yujsamādhau (to concentrate) (Dasgupta, 1975). The Yoga Sūtras of Patanjali defines yoga as "the stilling of the changing states of the mind"(Bryant, 2009). Yoga has also been popularly defined as "union with the divine" in other contexts and traditions (Bryant, 2009).

Various traditions of yoga are found in Hinduism, Buddhism and Jainism(Denise and John, 1996, Stuart, 2005 and Tattvarthasutra, 2007). In Hinduism, yoga is one of the six āstika ("orthodox") schools of Hindu philosophy(Jerry Stokes, 2007).

Yoga is also an important part of Vajrayana and Tibetan Buddhist philosophy(Chogyam , 2001, Edmonton 2007and Lama , 1998).Pre–philosophical speculations and diverse ascetic practices of first millennium BCE were systematized into a formal philosophy in early centuries CE by the Yoga Sutras of Patanjali(Whicher, 1998). By the turn of the first millennium, hatha yoga emerged from tantra(James, 2013 and Burley, 2000). It along with its many modern variations is the style that many people associate with the word yoga today. Vajrayana Buddhism, founded by the Indian Mahasiddhas,(Davidson, 2002) has a parallel series of asana and pranayama's, such as candela(Lama, 1998)and yantra yoga.

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Indian monks, beginning with Swami Vivekananda, brought yoga to the West in the late 19th century. In the 1980s, yoga became popular as a system of physical exercise across the Western world. This form of yoga is often called Hatha yoga. Many studies have tried to determine the effectiveness of yoga as a complementary intervention for cancer, schizophrenia, asthma and heart disease (Smith and Caroline, 2009, Vancampfort et al., 2012, Sharma and Taj, 2012 and Innes and Cheryl, 2005). In a national survey, long-term yoga practitioners in the United States reported musculo–skeletal and mental health improvements (Birdee et al., 2008).

AEROBIC

Aerobic exercise (also known as cardio) is physical exercise of relatively low intensity that depends primarily on the aerobic energy-generating process (Sharon and Denise, 2007). Aerobic literally means "living in air" (Kenneth, 1997) and refers to the use of oxygen to adequately meet energy demands during exercise via aerobic metabolism (William et al., 2006). Generally, light-to-moderate intensity activities that are sufficiently supported by aerobic metabolism can be performed for extended periods of time (Sharon and Denise, 2007). The intensity should be between 60 and 85% of maximum heart rate.

When practiced in this way, examples of cardiovascular or aerobic exercise are medium to long distance running, jogging, swimming, cycling, and walking, according to the first extensive research on aerobic exercise, conducted in the 1960s on over 5,000 U.S. Air Force personnel by Dr. Kenneth H. Cooper(Kenneth, 1983 and Netburn, 2009).

METHODOLOGY

For the purpose of this present study, thirty students were selected from government high school, Thondamuthur, Coimbatore. The subjects were divided into two equal groups as specified category. The subjects were age ranged from under-14 only.

Selection of variables and criterion measures

Abdominal plus was assessed by Strength of psoas, abdominal minus was assessed by Strength of minus psoas, Psoas & lower abdomen was assessedby Strength of psoas & lower abdomen.

Training programme

The training programme was lasted for 4o to 50 minutes per session for 5 days in a week for a period of 6 weeks duration. These 40 to 50 minutes included 5 minutes warm up and 5 minutes warm down. Remaining minutes allotted for yogic exercises and aerobic exercise training programme. The training session divided two parts first 15 minutes given yogic exercise after 5 minutes rest followed by aerobic exercises given15 minutes.

Statistical Techniques

The collected data have been comparing between experimental group and control group analyses in “t- ratio” will be used in 0.05 level of confidence.

RESULT AND STATISTICAL ANALYSIS

Analysis of Data

The't' ratio was used to analyze the data collected onminimum muscular fitness among high school boys. The results obtained on variables, have been processed and well tabulated so as to analyze and interpret the results. In this chapter, further to test the significance of results and level of significance is 0.05 levelswere chosen and considered as this as appropriate for the present study.

Table 1
Computation of the 't' ratio for Experimental group on abdominal plus

		Mean	N	SD	SEM	M.D	't' ratio
Experimental group	Pre	4.93	15	0.80	0.21	1.66	10.46*
	Pos	6.60	15	0.98	0.25		
Control group	Pre	4.00	15	0.65	0.17	0.20	1.14
	pos	3.80	15	0.56	0.14		

*significant at 0.05 level (2.14)

Table 1 Shows that the mean value of experimental group on pre and posttest mean were 4.93 and 6.60 respectively. The obtain t-ratio was 10.46 on abdominal plus were higher than the table value 2.14 for significance at 0.05 level of confidence. The result of the study shows that there was significant different in abdominal plus between pre and posttest of experimental group.

Bar diagram showing the mean value of abdominal plus between Experimental and control group

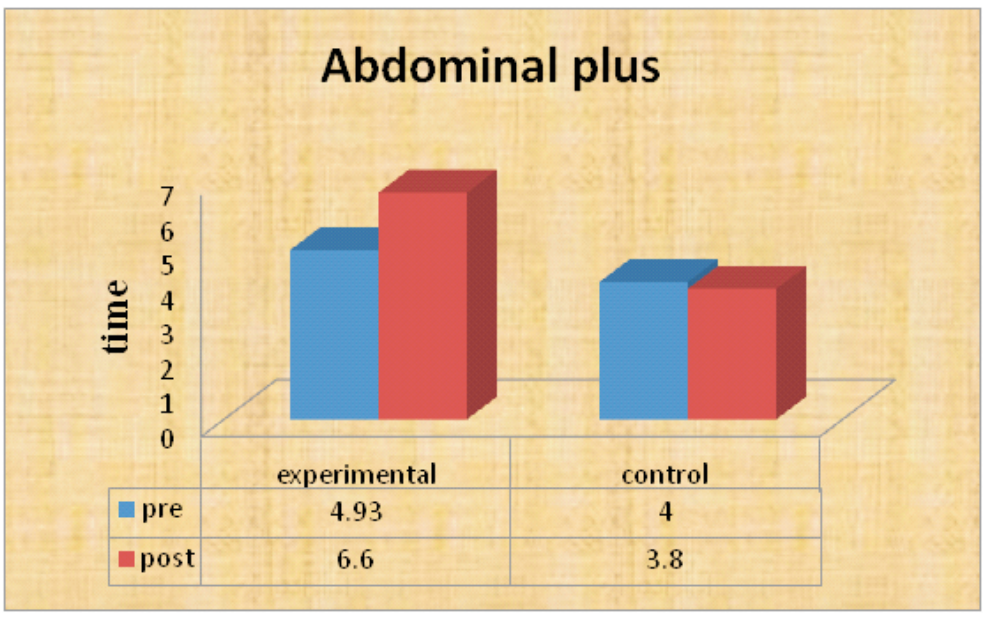


Table 2
Computation of the 't' ratio for Experimental group on abdominal minus

		Mean	N	SD	SEM	M.D	't' ratio
Experimental group	Pre	5.07	15	0.89	0.29	1.33	6.32*
	Pos	6.40	15	0.91	0.23		
Control group	Pre	3.87	15	074	0.19	0.20	1.00
	pos	3.67	15	0.49	0.12		

*Significant at 0.05 level (2.14)

Table 2 Shows that the mean value of experimental group on pre and posttest mean were 5.07 and 6.40 respectively. The obtain t-ratio was 6.32 on abdominal plus were higher than the table value 2.14 for significance at the level of confidence. The result of the study shows that there was significant different in abdominal minus between pre and post test of experimental group.

Bar diagram showing the mean value ofabdominal minus between Experimental and Control group

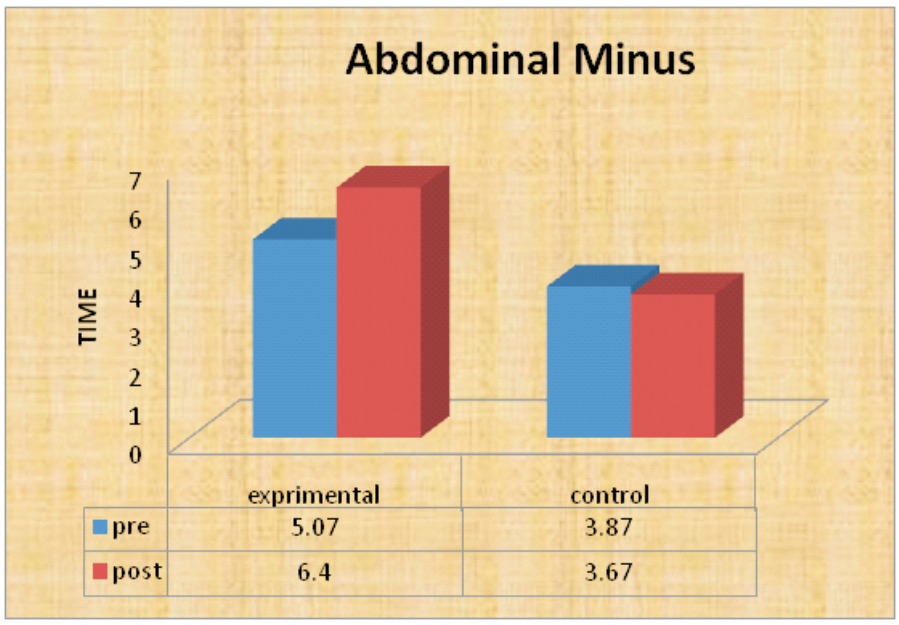


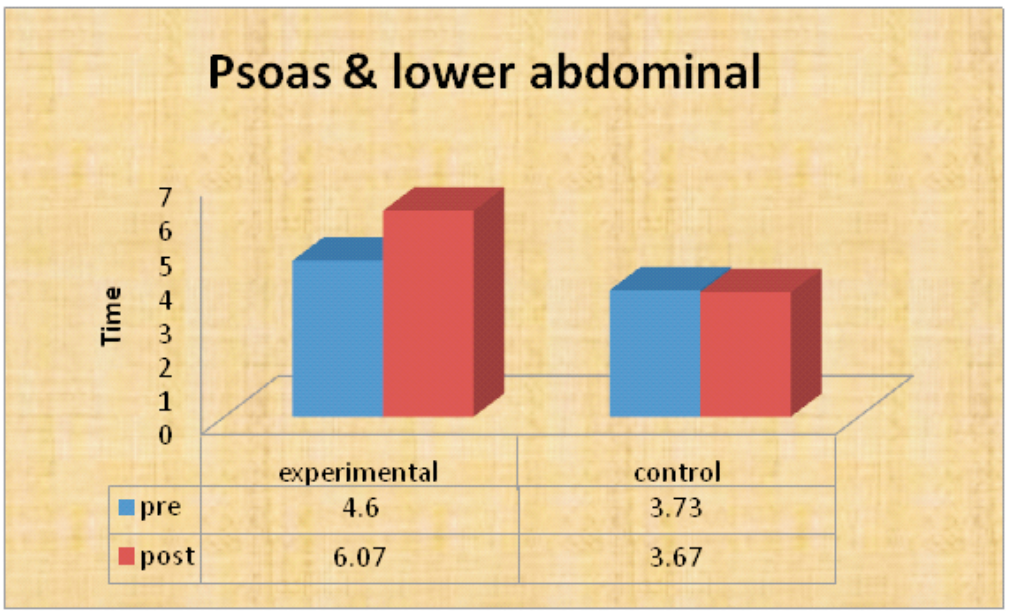
Table 3
Computation of the 't' ratio for Experimental group on psoas &lower abdomen

		Mean	N	SD	SEM	M.D	't' ratio
Experimental group	Pre	4.60	15	0.74	0.19	1.46	11.00*
	Pos	6.07	15	0.59	0.15		
Control group	Pre	3.73	15	0.70	0.18	0.06	0.43
	pos	3.67	15	0.49	0.12		

Significant at 0.05 level (2.14)

Table 3 Shows that the mean value of experimental group on pre and posttest means were 4.60 and 6.07 respectively. The obtain t-ratio was 11.00 on psoas &lower abdomen were higher than the table value 2.14 for significance at 0.05 level of confidence. The result of the study shows that there was significant different in poses&lower abdomenbetween pre and posttest of experimental group.

Bar diagram showing the mean value of psoas & lower Abdomen between Experimental and control group



DISCUSSION ON FINDINGS

For this study the effect of yogic exercise with aerobic training programme on minimum muscular fitness were taken, the selected variables for this study were minimum muscular fitness, abdominal plus, abdominal minus, posas& lower abdomen for 6 weeks improved on the variables. In control group they do not have any improved on the variables. There was significant improvement on minimum muscular fitness of high school boys due to six weeks of yogic exercises with aerobic training. There was significantly 33.87% improvement on abdominal plus of high school boys due to six weeks of Yogic exercise with aerobic training. There was significantly 26.23% improvement on abdominal minus of high school boys due to six weeks of Yogic exercise with aerobic training. There was significantly 31.95% improvement on posas & lower abdomen of high school boys due to six weeks of Yogic exercise with aerobic training.

CONCLUSIONS

On the basis of results within the limitations of the present study, the following conclusions were drawn:

1.There was significant improvement on selected minimum muscular fitness of high school boys due to six weeks of yogic exercises with aerobic exercise.
2.There was significant improvement on abdominal plus of high school boys owing to six weeks of Yogic exercise with aerobic exercise.
3.There was significant improvement on abdominal minus of high school boys because of six weeks of Yogic exercise with aerobic training no significant.
4.There was in significant improvement on psoas & lower abdomen of high school boys an account of six weeks of Yogic exercise with aerobic exercises

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