

Effect Of Yogic Practices And Aerobic Training On Explosive Power Among Physical Education Students

Dr. A. PALANISAMY

*Professor and Head, Department of Physical Education, Bharathidasan University,
Tiruchirappalli, Tamilnadu, India.*

ABSTRACT

The purpose of the study was to find out the effect of yogic practices and aerobic training on explosive power among physical education students. To achieve the purpose of the present study, forty five physical education students from Department of Physical Education, Bharathidasan University, Tiruchirappalli, Tamilnadu were selected as subjects at random and their age ranged from 18 to 25 years. The subjects were divided into three equal groups. The study was formulated as a true random group design, consisting of a pre-test and post-test. The subjects (n= 45) were randomly assigned to three equal groups of fifteen each. The groups were assigned as yogic practices, aerobic training and control group in an equivalent manner. The two training groups participated for a period of twelve weeks and the post-tests were conducted. The Analysis of covariance (ANCOVA) was used to test the treatment effect of the training programmes on all the variables used in the study. When the adjusted post-test was significant, the Scheffe's post-hoc test was used to find out the paired mean differences. The experimental groups had achieved significant improvement on explosive power of physical education students when compared to control group.

KEYWORDS: Yogic Practices, Aerobic Training, Explosive power, Physical Education Students.

INTRODUCTION

The easiest path to reach this state of dispassion and undisturbed tranquillity is the path of Bhakti or love. Here, man surrenders his all-mind, soul, ego-to the Divine Being and is only led on by the Divine will. Self-surrender the Diving Name. Such repetition must not be mechanical but one-pointed and full of favor. For this, concentration is necessary. concentration can be there only if man has practiced to fix his attention on a particular object without letting it dwell on anything else. Concentration also calls for regulation of conduct if Bhakti must develop. Good cheer, compassion, absence of jealousy, complacence towards the virtuous and consideration towards the wicked must be consciously cultivated. There are also methods of regulated breathing which help reach concentration (Mohan, 2002).

The word Aerobic literally means "with oxygen or in the presence of oxygen". Aerobic exercises are any activity that uses large muscle groups can be maintained continuously for long period of time and is rhythmic in nature. Aerobic activity trains the heart, lungs and cardiovascular system to process and deliver oxygen more quickly and efficiently to every part of the body. As the heart muscle becomes stronger and more efficient. A larger amount of blood can be pumped with oxygen to all parts of the body. An aerobically fit individual can work a quicker recovery if the end of the aerobic session. Aerobic exercise uses large muscle group rhythmically and continuously and elevate the heart breathing for a sustained period. Common examples include walking, jogging, running, swimming, rowing, stair climbing, cycling, cross-country skiing, step and dance exercise classes, roller skating and the more forms of tennis, racquet ball and squash. Aerobic exercise

refers to exercise that is of moderate intensity, undertaken for a long duration. Aerobic means "with oxygen", and refers to the use of oxygen in a muscle's energy-generating process. Many types of exercise are aerobic, and by definition are performed at moderate levels of intensity for extended periods of time.

METHODOLOGY

The purpose of the study was to find out the effect of yogic practices and aerobic training on explosive power among physical education students. To achieve the purpose of the present study, forty five physical education students from Department of Physical Education, Bharathidasan University, Tiruchirappalli, Tamilnadu were selected as subjects at random and their age ranged from 18 to 25 years. The subjects were divided into three equal groups. The study was formulated as a true random group design, consisting of a pre-test and post-test. The subjects (n= 45) were randomly assigned to three equal groups of fifteen each. The groups were assigned as yogic practices, aerobic training and control group in an equivalent manner. The two training groups participated for a period of twelve weeks and the post-tests were conducted. The Analysis of covariance (ANCOVA) was used to test the treatment effect of the training programmes on all the variables used in the study. When the adjusted post-test was significant, the Scheffe's post-hoc test was used to find out the paired mean differences.

RESULTS

TABLE – I
COMPUTATION OF MEAN AND ANALYSIS OF COVARIANCE ON EXPLOSIVE POWER OF YOGIC PRACTICES, AEROBIC TRAINING AND CONTROL GROUPS

	Yogic Practices Group	Aerobic Exercises Group	Control Group	Source of Variance	Sum of Squares	df	Mean Square	F
Pre Test Mean	0.18	0.19	0.18	BG	0.001	2	0.001	0.71
				WG	0.03	42	0.001	
Post Test Mean	0.30	0.31	0.20	BG	0.10	2	0.05	26.94*
				WG	0.08	42	0.002	
Adjusted Post Test Mean	0.30	0.31	0.20	BG	0.10	2	0.05	26.31*
				WG	0.08	41	0.002	

* Significant at 0.05 level

Table value for df 2, 42 was 3.21 and 2, 41 was 3.22

The above table indicates the adjusted mean value of explosive power of experimental yogic practices group, experimental aerobic training group and control groups were 0.30, 0.31 and 0.20 respectively. The obtained F-ratio of 26.31 for adjusted mean was greater than the table value 3.22 for the degrees of freedom 2 and 41 required for significance at 0.05 level of

confidence. The result of the study indicates that there was a significant difference among experimental and control groups on explosive power. The above table also indicates that both pre and post test means of experimental and control groups differ significantly. The pre, post and adjusted mean values of explosive power of both experimental and control groups are graphically represented in the figure – I.

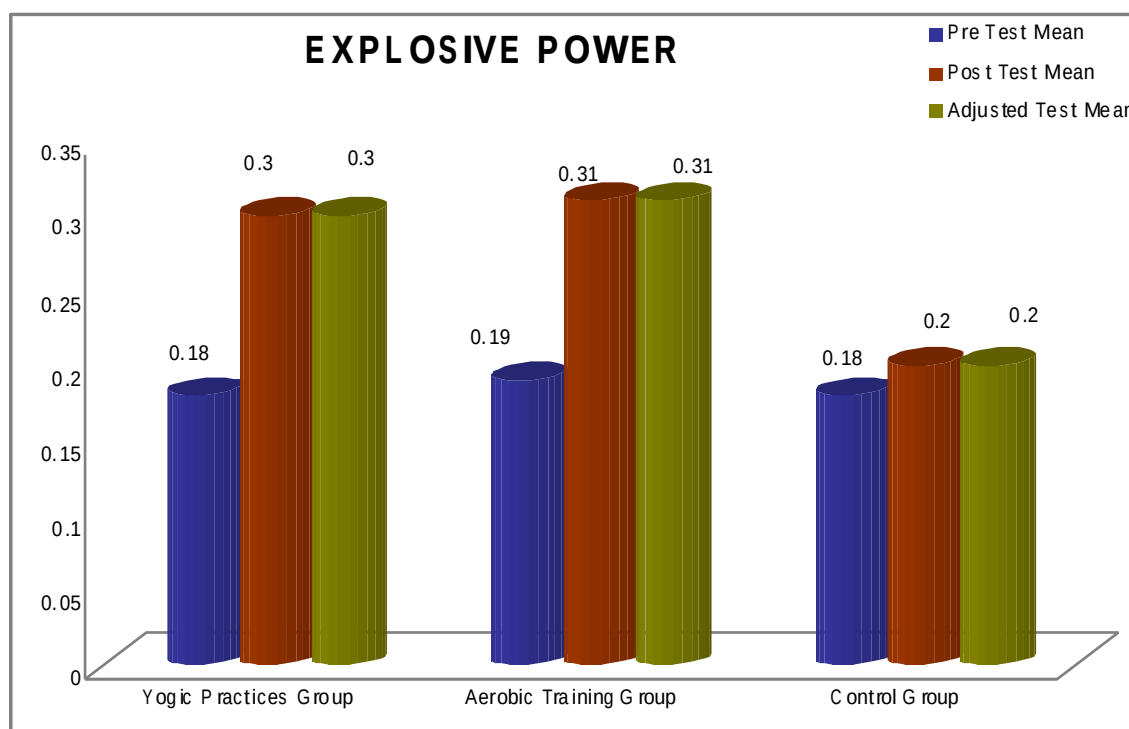


FIGURE – I
SHOWS THE MEAN VALUES ON EXPLOSIVE POWER OF YOGIC PRACTICES
AND AEROBIC TRAINING AND CONTROL GROUPS

TABLE - II
ADJUSTED MEAN AND DIFFERENCES BETWEEN THE MEANS OF YOGIC
PRACTICES, AEROBIC TRAINING AND CONTROL
GROUPS ON EXPLOSIVE POWER

Yogic Practices Group	Aerobic Training Group	Control Group	Mean difference	CI value
0.30	0.31	---	0.01	
0.30	---	0.20	0.10*	0.04
---	0.31	0.20	0.11*	

Table - II shows the adjusted means on explosive power and difference between the means of the yogic practices group, aerobic training group and control group. The mean differences of yogic practices group and control group, aerobic training group and control group were 0.10 and 0.11 respectively was greater than the CI value 0.04. Hence there exists significant difference. The mean difference between yogic practices group and aerobic

training group was 0.01 lesser than the CI value 0.04. Hence there exists no significant difference.

CONCLUSIONS

From the results obtained, the following conclusions were drawn:

1. It was observed that the twelve weeks of yogic practices have significantly improved the explosive power of physical education students.
2. It was observed that the twelve weeks of aerobic training have significantly improved the explosive power of physical education students.
3. The experimental groups had achieved significant improvement on explosive power of physical education students when compared to control group.

REFERENCES

1. Barrow, H., M. and McGee, R. (1971). *A Practical Approach to Measurement in Physical Education*, Philadelphia: Lea & Febiger.
2. Baumgartner, A. T. and Andrew, J. (1987). *Measurement for Evaluation in Physical Education and Exercise Science*. IOWA: W.M.C Brown Publishers.
3. Chatterjee, F., Bruse, S.A. & Woldege, R.C. (2010). Effect of yogic practices on human Growth hormone in a middle aged group: a pilot study. *Yoga Mismamsa a Quarterly Journal*, Vol XLII.1, PP.40-47.
4. Chen, T.L., Mao, H.C., Lai, C.H., Li & Kuo, C.H. (2009). The effect of yoga exercise intervention on health physical fitness in school age asthmatic children. *The journal of Nursing TAIWAN*, Vol.56 (2): PP.42-53.
5. Gillette, P.A., and Elsemann, P.A. (2003). The effect of intensity controlled aerobic dance exercise aerobic on capacity of middle aged, overweight women. www.google.com.
6. Groot, DE, S, Janssen TW, Evers M, Van Der Luijt P, Nienhuys, KN. & Dallmeijer AJ (2012). Feasibility and reliability of measuring strength, sprint power, and aerobic capacity in athletes and non-athletes with cerebral palsy. *Dev Med Child Neurol*. 2012 Mar 27. doi: 10.1111/j.1469-8749.2012.04261.x.
7. Joshi, K. (2001). *Yogic Pranayama*, New Delhi: Orient Paper Backs.
8. Kristal, A.R., Littman, A.J., Benitez, D., White, E. (2005). Yoga practice is associated with attenuated weight gain in healthy, middle aged men and women. *Journal of alternative therapies in health and Medicine*, Vol.11(4):pp.28-33.
9. Lennart Nathell, Madelene Nathell, Per Malmberg and Kjell Larsson. (2007). COPD diagnosis related to different guidelines and spirometry techniques. *Respiratory Research* 2007, 8:89.
10. Lofrano-Prado MC, Hill JO, Gomes Silva HJ, Menezes Freitas CR, Lopes-de-Souza S, Lins TA, do Prado WL. (2012). Acute effects of aerobic exercise on mood and hunger feelings in male obese adolescents: a crossover study. *Int J Behav Nutr Phys Act*. 2012 Apr 3;9(1):38.
11. Mohan, A.G. (2002). *Yoga for body, breath and mind: A guide to personal reintegration*, Boston, MA: Shambala.
12. Moorthy A.M. & David Manu Raju, J. (1983). *Yoga for Health*. Madras: M.J.Publishers.