



Hatha yogic package on body composition

K Selvakumar¹, S Parthasarathy², Marinarai³, Sumitra Das⁴

¹⁻⁴ Research Scholar, Alagappa University College of Physical Education, Alagappa University, Karaikudi, Tamil Nadu, India

Abstract

The purpose of the present study was to investigate the effect of hatha yogic package on body composition among high school boys. To achieve the purpose of the study thirty school boys were selected from Karaikudi, Tamilnadu, India during the year 2019. The subject's age ranges from 15 to 17 years. The selected students were divided into two equal groups consists of 15 students each namely experimental group and control group. The experimental group underwent a hatha yogic package programme for eight weeks. The control group was not taking part in any training during the course of the study. Body Composition was taken as criterion variable in this study. The selected subjects were tested on Body Composition was measured through body composition analyzer method. 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 hatha yogic package given to the experimental group on Body Composition when compared to control group.

Keywords: Hatha Yogic practice, body composition and 't' ratio

Introduction

Yoga is a great soul of the Universe. It can promote the social well-being through limbs of yoga (Asanas, Pranayama, Kriyas, Mudras and Meditations). To practising yoga regularly it can make you into sound body and sound mind. Yoga is the costless permanent treatment for more diseases, alaguraja, k [1]. It is a practical holistic philosophy designed to bring about profound state as well is an integral subject, which takes into Consideration man as a whole, alaguraja, k. *et al* [2].

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*, [3]. The science of Yoga Nidra is based on the receptivity of consciousness. 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*, [4]. Training is a chain process that can be able to attain certain needs of the person's goal, alaguraja, k [5]. 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*, [6]. 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*, [7]. The sports training can produce some physical fitness, Physiological and psychological benefits to the person and attain performance related task. It's also promoting the individual overall wealth to the sports person, alaguraja, k [8]. Yoga is a methodical effort towards self-perfection by the development of the potentialities latent in the individual, alaguraja, k. *et al*, [9]. 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*, [10]. Asanas is a limb of Yoga practice it can make some health related gains to the individual who involved in yogasana practice regularly. Asanas can be used upon the needs of the person. It's a scientific process the person must be follow the basic principles yogasana practice, alaguraja, k. [11]. Yoga is a practical aid, not a religion and its techniques may be practiced by Buddhist, Jews, Christians, Muslims, Hindus and Atheist alike. Yoga is union for all, selvakumar, k. *et al*, [12]. Yogic action, or inner technique, such as breath control, parthasarathy. s. *et al*, [13].

Research Methodology

Selection of subjects

The purpose of the study was to find out the effect of hatha yogic training on Body Composition among high school boys. To achieve this purpose of the study, thirty school boys were selected as subjects at random. The age of the subjects were ranged from 15 to 17 years.

Selection of variable

Independent variable

- Hatha Yogic Practice

Dependent variable

- Body Composition

Experimental Design and Implementation

The selected subjects were divided into two equal groups of fifteen subjects each, such as a hatha yogic training group (Experimental Group) and control group. The experimental group underwent Hatha Yogic training for six days per week

for eight weeks. Control group, which they did not undergo any special training programme apart from their regular physical activities as per their curriculum. The following physical variable namely Body Composition was selected as criterion variable. All the subjects of two groups were tested on selected criterion variable Body Composition was measured through body composition analyzer method at prior to and immediately after the training programme.

Statistical technique

The 't' test was used to analysis the significant differences, if

any, difference between the groups respectively.

Level of significance

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 1: Analysis of t-ratio for the pre and posttests of experimental and control group on Body Composition (Scores counts in number)

Variables	Group	Mean		SD		df	't' ratio
		Pre	Post	Pre	Post		
Body Composition	Control	27.53	27.66	2.26	2.09	14	0.52
	Experimental	27.60	26.13	2.13	1.76		11.00*

*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 Body Composition were 27.53 and 27.66 respectively. The obtained 't' ratio was 0.52, 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 Body Composition were 27.60 and 26.13 respectively.

The obtained 't' ratio was 11.00* 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 Body Composition. It may be concluded from the result of the study that experimental group improved in Body Composition due to six weeks of hatha yogic training.

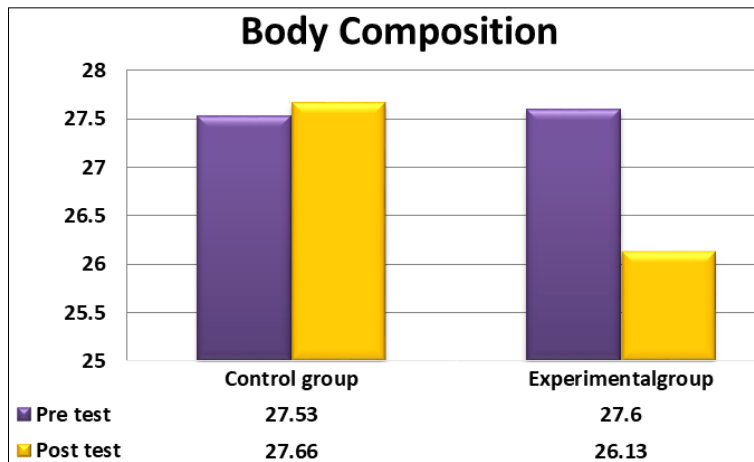


Fig 1: Bar Diagram Showing the Pre and Post Mean Values of Experimental and Control Group on Body Composition

Discussions on Findings

The result of the study indicates that the experimental group, namely hatha yogic training group had significantly improved the selected dependent variable, namely Body Composition, when compared to the control group. It is also found that the improvement caused by hatha yogic training when compared to the control group.

Conclusion

On the basis of the results obtained the following conclusions are drawn,

1. There was a significant difference between experimental and control group on Body Composition after the training

2. There was a significant improvement in Body Composition. However the improvement was in favor of experimental group due to six weeks of hatha yogic training.

References

1. Alaguraja K. Analyze of combined asanas pranayama practices on psychosocial parameter among sports people. Indian Journal of Applied Research. 2019; 9(10):73-74.
2. Alaguraja K, Yoga P. Influence of yogasana practice on flexibility among obese adolescent school boys. International Journal of Yoga, Physiotherapy and

- Physical Education. 2017; 2(7):70-71.
3. Alaguraja K, Yoga P. Effect of yogic practice on resting pulse rate among school students. *Indian Journal of Applied Research*. 2019; 9(7):43-44.
 4. Yoga P, Balamuralikrishnan R, Alaguraja K. Influence of cyclic meditation on selected physiological parameter. *International Journal of Advanced Education and Research*. 2019; 4(1):17-18.
 5. Alaguraja K. Analyze of combined asanas pranayama practices on psychosocial parameter among sports people. *Indian Journal of Applied Research*. 2019; 9(10):73-74.
 6. Alaguraja K, Yoga P. Effect of core stability training on dynamic strength among college male students. *International Journal of Yogic, Human Movement and Sports Sciences*. 2018; 3(2):436-437.
 7. Alaguraja K, Yoga P, Balamuralikrishnan R, Selvakumar KA scientific study on efficacy of yogic package on resting pulse rate among obese school students. *Journal of Information and Computational Science*. 2019; 9(8):483-487.
 8. Alaguraja K. Analyze of combined asanas pranayama practices on psychosocial parameter among sports people. *Indian Journal of Applied Research*. 2019; 9(10):73-74.
 9. Alaguraja K, Yoga P. Analyze of pranayama technique on physiological parameter among rural school students. *Journal of Information and Computational Science*. 2019; 9(8):545-550.
 10. Alaguraja K, Yoga P, James Rathinaraj SR, Selvakumar K. A study on yoga intervention on maximal oxygen uptake among stress patient. *Indian Journal of Applied Research*. 2019; 9(9):38-39.
 11. Alaguraja K. Analyze of combined asanas pranayama practices on psychosocial parameter among sports people. *Indian Journal of Applied Research*. 20019; 9(10):73-74.
 12. Selvakumar K, Yoga P. Influence of yogic practice on flexibility among college students. *Indian Journal of Applied Research*. 2019; 9(7):45-46.
 13. Parthasarathy, Dhanaraj. A scientific study on combined effect of yogasana and shambhavi mahamudra practice on systolic blood pressure. *Indian Journal of Applied Research*. 2019; 9(11):45-46.
 14. Balasubramanian K, Yogaraj P. Effect of Weight Training and Physical Exercises on Bio-Chemical Variables among College Football Players. *International journal of Physical Education*. 2009; 2(1 & 2):1-4.
 15. Selvalakshmi S, Yogaraj P. Effect of Varied Yogic Practices on Haemoglobin and Blood Sugar among Obese Women. *Asian Journal of Physical Education & Computer Science in Sports*. 2009; 1(1):262-264.
 16. Yogaraj P, Ramaraj P, Elangovan R. Effects of Selected Asanas on Serum Cholesterol and Functions of Adrenal Gland in College Women. *Asian Journal of Physical Education & Computer Science in Sports*. 2010; 2(1):206-208.
 17. Yogaraj P, Ramaraj P, Elangovan R. Effect of Selected Yogic Practices Physical Exercises on Bio-Chemical Variables among College Women Students. *Asian Journal of Physical Education & Computer Science in Sports*. 2010; 3(1):27-29.
 18. Anandakumar P, Yoga P, Elangovan R. Effect of Selected Asana and Suryanamaskar on Selected Physiological Variables among Diabetic Patients. *Asian Journal of Physical Education & Computer Science in Sports*. 2010; 4(1):130-131.
 19. Yogaraj P, Elangovan R. Effect of Varied Packages of Yogic Practice on Selected Bio-Chemical Variables of College men Students. *International journal of Physical Education Sports Management and Yogic Sciences*. 2011; 1(1):35-39.
 20. Yoga P. Effect of Varied Integrated Modules of Yogic Practices on Platelets Count among Women Type II Diabetic Patients. *Asian Journal of Physical Education & Computer Science in Sports*. 2013; 9(1):47-49.
 21. Yoga P. Effect of Varied Integrated Modules of Yogic Practices on White Blood Cell Count among Women Type II Diabetic Patients. *International journal of Physical Education Sports Management and Yogic Sciences*. 2014; 4(1):33-36.
 22. Yoga P. Effect of Varied Integrated Modules of Yogic Practices on Red Blood Cell Count among Women of Type II Diabetic Patients. *International journal of Sports Technology, Management and Allied Sciences*. 2014; 3(1):70-74.
 23. Yoga P. Effect of Varied Packages of Yogic Practices on White Blood Cell Count among College Men Students. *International Journal of Health, Physical Education & Computer Science in Sports*. 2014; 15(1):47-49.
 24. Yoga PP. Influence of Varied Packages of Yogic Practices on Cardio Vascular Endurance among College Men Students. *International Journal Engineering Research & Sports Science*. 2015; 2(2):33-34
 25. Yoga P, Ranjith VP. Efficacy of Sectional Breathing and Nadi Suddhi Pranayama on White Blood Cell Count among College Men Students. *International Journal of Health, Physical Education & Computer Science in Sports*. 2015; 17(2):16-18.
 26. Yoga P. Efficacy of Sectional Breathing and Nadi Suddhi Pranayama on Red Blood Cell Count among College Men Students. *International Journal of Information Research and Review*. 2015; 2(3):537-539.
 27. Alaguraja K, Yoga P. Influence of Yogasana Practice on Flexibility among Obese Adolescent School Boys. *International Journal of Yoga Physiotherapy and Physical Education*. 2017; 2(4):70-71.
 28. Yoga P. Effect of Circuit Training on Respiratory Frequency among Male Handball Players. *International journal of health, physical education & computer science in sports*. 2018; 29(2):153-155.
 29. Balamuralikrishnan R, Yoga P. Effect of varied intensity of aerobic training on body composition. *International Journal of Physical Education, Sports and Health*. 2018; 5(2):284-285.
 30. James Rathinaraj S, Yoga P. Structured resistance training on Vo2 Max. *International Journal of Physical Education Sports and Health*. 2018; 5(2):286-287.
 31. Yoga P, James Rathinaraj S. Yogic Practices on Heart Rate. *International Journal of Yogic Human Movement and Sports Sciences*. 2018; 3(2):349-350.
 32. Alaguraja K, Yoga P. Effect of core stability training on dynamic strength among college male students.

- International Journal of Yogic Human Movement and Sports Sciences. 2018; 3(2):436-437.
33. Selvakumar K, Yoga P. Changes of vertical jump through maximal power training among college men handball players. *International Journal of Yogic Human Movement and Sports Sciences*. 2018; 3(2):438-439.
 34. Yoga P, Balamuralikrishnan R. Effects of yoga on psychological variable among school boys. *International Journal of Yogic Human Movement and Sports Sciences*. 2018; 3(2):473-474.
 35. Yoga P, Balamuralikrishnan R, Alaguraja K. Influence of cyclic meditation on selected physiological parameter. *International Journal of Advanced Education and Research*. 2018; 4(1):17-18.
 36. Yoga P, James Rathinaraj S, Selvakumar K. Influence of intensive interval training on flexibility among college students. *International Journal of Advanced Education and Research*. 2018; 3(6):72-73.
 37. James Rathinaraj S, Yoga P. Effect of physical exercise on resting pulse rate among school students. *International Journal of Advanced Education and Research*. 2019; 4(1):21-22.
 38. Balamuralikrishnan R, Yoga P. Influence of Tibetan yoga on cardiovascular endurance among obese men students. *International Journal of Advanced Education and Research*. 2019; 4(1):19-20.
 39. Ranjith VP, Yoga P. Effect of yogic practice on resting pulse rate among college men handball players. *Indian journal of Applied Research*. 2019; 9(4):59-60.
 40. Alaguraja K, Yoga P. Effect of yogic practice on resting pulse rate among school students. *Indian journal of Applied Research*. 2019; 9(7):43-44.
 41. Selvakumar K, Yoga P. Influence of yogic practice on flexibility among college students. *Indian journal of Applied Research*. 2019; 9(7):45-46
 42. Alaguraja K, Yoga P, Balamuralikrishnan R, Selvakumar K. A of yogic package on resting pulse rate among obese school scientific study on efficacy students” *Journal of Information and Computational Science*. 2019; 9(8):483-487.
 43. Alaguraja K, Yoga P. Analyze of pranayama technique on physiological parameter among rural school students. *Journal of Information and Computational Science*. 2019; 9(8):545-550.
 44. Sumitra Das, Yoga P. Effect of yogic package on body mass index among rural school girls. *Journal of Information and Computational Science*. 2019; 9(8):462-467.
 45. Sumitra Das, Yoga P. A study on effect of combined yoga and naturopathy on triglycerides among high school girls. *Journal of Information and Computational Science*. 2019; 9(8):450-454.
 46. Marinarai, Yoga P. A scientific effect of yogic package on body mass index among class I obese. *Journal of Information and Computational Science*. 2019; 9(10):468-473.
 47. Marinarai, Yoga P. Efficacy of yogic therapy on high density lipoprotein among high school girls. *Journal of Information and Computational Science*. 2019; 9(10):455-459.
 48. Alaguraja K, Yoga P. A study on yogic package on body mass index among rural school boys. *International Journal of Physical Education, Exercise and Sports*. 2019; 1(2):07-09.
 49. Alaguraja K, Yoga P. Impact of yogic package on body mass index among obese people. *International Journal of Physical Education, Exercise and Sports*. 2019; 1(2):04-06.
 50. Alaguraja K, Yoga P. Combined pranayama and meditation practices on self-confidence. *International Journal of Physical Education, Exercise and Sports*. 2019; 1(2):01-03.
 51. Alaguraja K, Yoga P. Mindfulness meditation on stress among working men. *International Journal of Physiology, Sports and Physical Education*. 2019; 1(1):09-11.
 52. Alaguraja K, Yoga P. Yogic therapy treatment on high density lipoprotein among high school boys. *International Journal of Physiology, Exercise and Physical Education*. 2019; 1(1):09-11.
 53. Alaguraja K, Yoga P. A study effect of combined yoga and naturopathy on triglycerides among stressed people. *International Journal of Physiology, Exercise and Physical Education*. 2019; 1(1):09-11.
 54. Alaguraja K, Yoga P. Analysis the effect of yogic package on low density lipoprotein among trained handball players. *International Journal of Physiology, Exercise and Physical Education*. 2019; 1(1):09-11.
 55. Alaguraja K, Yoga P. A sequence of combined effect of SAQ training and yogic package on self confidence among handball players. *International Journal of Sports, Exercise and Physical Education*. 2019; 1(1):15-17.
 56. Alaguraja K, Yoga P. Pranayama package on systolic blood pressure among Middle Ages unemployed women. *International Journal of Sports, Exercise and Physical Education*. 2019; 1(1):18-20.