



## Effect of Hatha Yoga Sadhana on Selected Physiological Variables among Anorexia Syndrome Teenage Girls

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### Abstract

The present study was designed to find out the effect of hatha yoga sadhana on selected physiological variables among anorexia syndrome teenage girls. It was hypothesized that there would be significant differences in among anorexia syndrome teenage girls due to the influences of hatha yoga sadhana. To achieve the purpose of the study, 30 anorexia syndrome teenage girls from Chennai city. The Experimental group underwent hatha yoga sadhana for the period of 6 weeks of an hour in the morning. The control group was not exposed to any specific training but they participated in the regular activities. The pre-test and post-test were conduct before and after the training for two groups. The data pertaining to the variables collected from the three groups before and after the training period were statistically analyzed by using Analysis of Covariance (ANCOVA) to determine the significant difference and tested at 0.05 level of significance.

**Keywords:** Hatha Yoga Sadhana ,Systolic, Diastolic Blood Pressure.

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### Introduction

India is one of the major countries where communicable diseases are still not under control. The incidence of new fatal diseases such as AIDS / HIV, hepatitis-A is on the increase tuberculosis and malaria still takes a high toll. Chronic non-communicable diseases such as heart diseases, diabetes and cancer are also in the rise (Bhat & Babu 2004). Anorexia nervosa is an eating disorder characterized by food restriction, odd eating habits or rituals, obsession with having a thin figure, and an irrational fear of weight gain. It is accompanied by a distorted body self-perception, and typically involves excessive weight loss. Due to their fear of gaining weight, individuals with this disorder restrict the amount of food they consume. Outside of medical literature, the terms anorexia nervosa and anorexia are often used interchangeably; however, anorexia is simply a medical term for lack of appetite and the majority of individuals afflicted with anorexia nervosa do not lose their appetites. Anorexia nervosa is often coupled with a distorted self image which may be maintained by various cognitive biases that alter how individuals evaluate and think about their body, food, and eating. People with anorexia nervosa often view themselves as overweight or not thin enough even when they are underweight. While the majority of people with anorexia nervosa continue to feel hunger, they deny themselves all but very small quantities of food.

Anorexia nervosa is diagnosed approximately nine times more often in females than in males. In 2013 it resulted in about 600 deaths globally up from 400 deaths in 1990. It is a serious health condition with a high incidence of comorbidity and similarly high mortality rate to serious psychiatric disorders. (www.encyclopedia.com)

Anorexia nervosa is an eating disorder that is characterized by attempts to lose weight, to the point of self-starvation. A person with anorexia nervosa may exhibit a number of signs and symptoms, the type and severity of which may vary in each case and may be present but not readily apparent. The unitive discipline of the force (meaning the serpent power or Kundalini-shakti), or forceful unitive discipline is hatha yoga. The word Yoga is derived from the Sanskrit root Yuj. The meaning is to bind, join, and attach and yoke, to direct and concentrate one's attention on, to use and apply. It also means union or communion. It means the disciplining of the mind, intellect, the emotions, the will, which yoga presupposes, it means a poise of the soul which enables one to look at life in all its aspects evenly. Yoga is one of the six orthodox systems of Indian philosophy. It was coordinated and systematized by Patanjali in his classical work, the Yoga Sutras, which consists of 195 terse aphorisms in which it is stated that yoga is a state where all activities of the mind are channalized in one direction or the mind is free from distractions (Swamy Satyanand Saraswati, 1996).

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### Methodology

The present study was to find out the effect of hatha yoga sadhana on selected physiological variables

among anorexia syndrome teenage girls. To achieve the purpose of the study, 30 anorexia syndrome teenage girls from Chennai city were selected randomly into experimental group and control groups of 15 subjects each. The selected subjects were divided in to two groups namely experimental group and control group with 15 subjects each in a group. Experimental Group underwent hatha yoga sadhanas for the period of 6 weeks for the maximum of an hour in the morning. The control group (CG) was not exposed to any specific training but they participated in the regular activities.

**Training Programme**

Experimental Group I –Hatha yoga sadhana,  
Group – II Control Group (No training).

**Training programme of Experimental group – (Hatha Yoga Sadhana)**

Pawanamukthasana series, Sun salutation, Ardha Kati Chakrasana, Utthita Trikonasana, Kati Chakrasana, Drutha Halasana and Jathara Parivardhanasana, Bhujangasana, Ardha Shalabhasana, Shashankasana and Shavasana. Kapalabhati, Ujjayi or Nadi Shuddhi Pranayama. Meditation and relaxation.

**Results**

**Table I.** Computation of analysis of co variance of the means of experimental group and control groups on systolic blood pressure

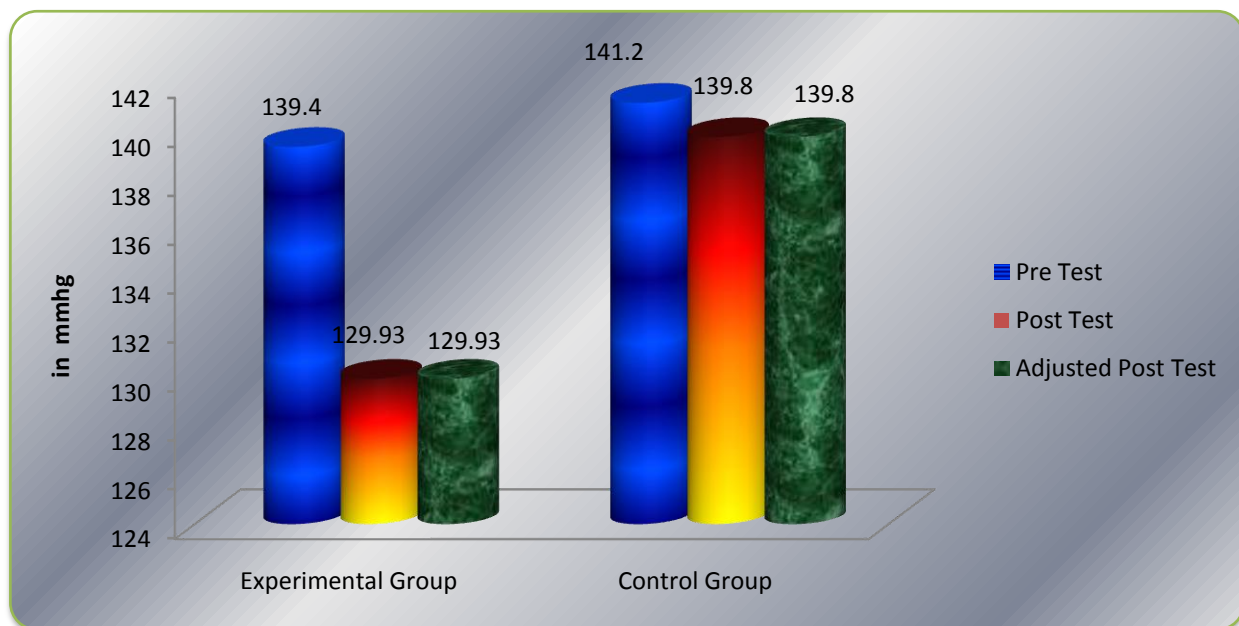
Test	Exp Group I	Control group	SV	SS	DF	MS	Obtained F value
Pre Test	139.40	141.20	Between	24.30	1.00	24.30	1.22
			Within	560.00	28.00	20.00	
Post Test	129.93	139.80	Between	730.13	1.00	730.13	35.17*
			Within	581.33	28.00	20.76	
Adjusted Post Test	129.93	139.80	Between	700.68	1.00	700.68	32.54*
			Within	581.33	27.00	21.53	
Mean Gain	9.47	1.40					

\*significant

Table I revealed that the obtained ‘F’ value of 32.54 was found to be significant at 0.05 level with df 1, 27 as the tabulated value of 4.21 required to be significant at 0.05 level. The same table indicated that

there was a significant difference in adjusted means of systolic blood pressure between experimental group and control group. The graphical representation of data has been presented in figure I.

**Figure I.** Comparisons of Pre – Test Means Post – Test Means and Adjusted Post – Test Means for Control group and Experimental Group in relation to diastolic blood pressure



**Table II.** Computation of analysis of co variance of the means of experimental group and control groups on diastolic blood pressure

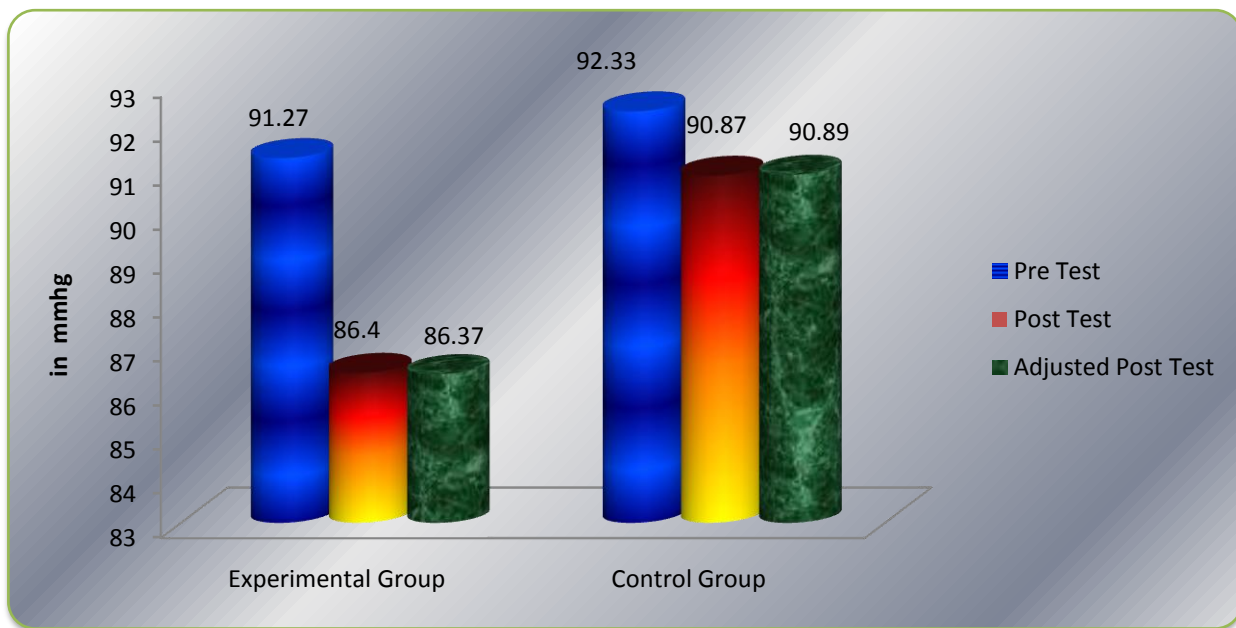
Test	Exp Group I	Control group	SV	SS	DF	MS	Obtained F value
Pre Test	91.27	92.33	Between	218.80	1.00	8.53	1.14
			Within	210.27	28.00	7.51	
Post Test	86.40	90.87	Between	149.63	1.00	149.63	21.90*
			Within	191.33	28.00	6.83	
Adjusted Post Test	86.37	90.89	Between	147.39	1.00	147.39	20.86*
			Within	190.76	27.00	7.07	
Mean Gain	-4.87	-1.47					

\*significant

Table II revealed that the obtained ‘F’ value of 20.86 was found to be significant at 0.05 level with df 1, 27 as the tabulated value of 4.21 required to be significant at 0.05 level. The same table indicated that

there was a significant difference in adjusted means of diastolic blood pressure between experimental group and control group. The graphical representation of data has been presented in figure II.

**Figure II.** Comparisons of Pre – Test Means Post – Test Means and Adjusted Post – Test Means for Control group and Experimental Group in relation to diastolic blood pressure



The results of the study indicated that the experimental group namely hatha yoga sadhanas had significantly on the selected dependent variables such as physiological variables. The results of the study showed that systolic and diastolic blood pressure decreased significantly as a result of hatha yoga sadhanas. Hence, the hypothesis was accepted at 0.05 level of confidence. Systematic hatha yoga sadhanas decrease the systolic and diastolic blood pressure.

**Conclusion**

1. During pre and post tests, the experimental group exhibited a significant decrease on Physiological variables such as systolic and diastolic blood pressure immediately after the practices than the control group.
2. The hatha yoga sadhanas helped to normalize the systolic and diastolic blood pressure among the anorexia syndrome teenage girls.

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