

EFFECT OF 4-WEEK YOGIC PRACTICES ON CARDIOVASCULAR ENDURANCE AND BODY COMPOSITION OF UNIVERSITY LEVEL GIRLS

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ABSTRACT

The aim of this study was to determine the effect of 4-week yogic practices on cardiovascular endurance and body composition of university level girls. The research population included sixty (N=60) female subjects between the age group of 18-25 years were selected as subjects from Department of Physical Education (T), Guru Nanak Dev University, Amritsar, Punjab (India). The subjects were purposively assigned into two groups: Group-A: Experimental (N₁=30) and Group-B: Control (N₂=30). All the subjects were informed about the objective and protocol of the study. The subjects from Group A were subjected to 4-week of yogic practices. The training consisted of a variety of yogic asanas: (i.e., Alanasana, utthita parsvakonasana, vasisthasana, purvottanasana, sarvangasana and sirsasana). The 4-week yogic practices brought about significant improvement in cardiovascular endurance ($t = 7.62$), and body composition ($t = 15.79$) in Group (A) as compared with the control one. The 4-week yogic practices had significant effect on cardiovascular endurance and body composition, Thus, such yogic practices may be recommended to improve cardiovascular endurance, body composition, may contribute to enhance concentration based performance and voluntary control of breathing.

Keywords: Yogic Practices, University Level girls.

INTRODUCTION:

Yoga is holistic, preventive as well as curative for all heart related problems. Modern medicines and drugs are expensive and have various side effects (Herur et al. 2010). These are in fact more curative rather than preventive. In turn, yoga is easy to learn and has many benefits. Yoga is an economical and alternative system of healing (Woody, 2008). It helps in relieving stress, enhancing health and improving fitness. It is today being widely used to prevent and treat various diseases of the heart. It results in wholesome healing. The Yogic way of life helps in the prevention of cardiovascular diseases and, in fact, helps in improving the cardiovascular health (Schroeder & O'connor 2005). Our body, mind and spirit are intricately interrelated and

constantly influence one another. The science of yoga that is holistic has been designed to have subtle effect on our whole being, body, mind as well as spirit Saha, 2012). The all pervasive stress and stress-induced disorders like hypertension and angina are fast growing epidemics and bane of today's modern society (Patricia, 2008). The science of yoga is the best method for prevention as well as management of stress and stress-induced disorders. To improve your cardiovascular health, a complete yoga program should be a way of your life. This prompted us to undertake this study with the aim to assess the effect of 4-week yogic practices on health related components of fitness of university level girls.

Material and methods

Sample

The researcher utilized the experimental method on a sample of sixty (N=60) female subjects between the age group of 18-25 years (Mean \pm SD: age 21.63 ± 2.29 years, height 1.62 ± 0.029 m, body mass 56.11 ± 3.58 kg) were selected as subjects from Department of Physical Education (T), Guru Nanak Dev University, Amritsar, Punjab (India). The subjects were purposively assigned into two groups: Group-A: Experimental (N₁=30) and Group-B: Control (N₂=30). All the subjects were informed about the objective and protocol of the study.

Methodology

The subjects from Group A were subjected to 4-week of yogic practices. The training consisted of a variety of yogic asanas.

- ✓ Alanasana
- ✓ utthita parsvakonasana
- ✓ vasisthasana
- ✓ purvottanasana
- ✓ sarvangasana
- ✓ sirsasana

Administration of Test

Cardiovascular Endurance was administered to assess aerobic fitness. The score is recorded to 1 min. recovery heart rate is the score for the test. Body Composition test was

administered to estimate a person's percent body fat. The score is to compare the values to the recommended percent body fat level and the evaluative norms provided.

Statistical Analysis

SPSS statistical software (version 16.0) was used to analyze. Student's t-test for independent data was used to assess the between-group differences and for dependent data to assess the Post-Pre differences. To test the hypothesis, the level of significance was set at 0.05.

Results

The results of 4-week of yogic practices on cardiovascular endurance and body composition of university level girls.

Table 1: Significance of differences between Pre-Test and Post-Test means of Experimental Group and the Control Group with regard to Cardiovascular Endurance.

Group	Number	Mean	S.D.	SEM	't' Value	P-value
Experiment (Pre-test)	30	96.45	6.79	1.42	7.62*	0.001
Experimental (Post-test)	30	88.13	2.30	0.42		
Control (Pre-test)	30	105.67	7.80	1.36	1.72	0.055
Control (Post-test)	30	104.66	8.86	1.43		

Table-1 presents the results of experimental group and the control group with regard to the variable cardiovascular endurance. The descriptive statistics shows the Mean and SD values of cardiovascular endurance of pre- test and post-test of experimental group was 96.45 ± 6.79 and 88.13 ± 2.30 respectively, whereas the Mean and SD values of cardiovascular endurance of pre-test and post-test of control group was 105.67 ± 7.80 and 104.66 ± 8.86 . The "t" value in case of experimental group was 7.62* and for control group it was 1.72. The 't'-value in case of experimental group 7.62* as shown in the table above was found statistically significant ($P < .05$) H_0 (null hypothesis) is rejected at .05 level of significance.

Table 2: Significance of differences between Pre-Test and Post-Test means of Experimental Group and the Control Group with regard to Body Composition.

Group	Number	Mean	S.D.	SEM	't' Value	P-value
Experiment (Pre-test)	30	24.60	1.53	0.22	15.79*	0.000
Experimental (Post-test)	30	17.50	1.62	0.21		
Control (Pre-test)	30	37.09	4.98	0.85	0.78	0.589
Control (Post-test)	30	37.34	6.65	1.14		

Table-2 presents the results of experimental group and the control group with regard to the variable body composition. The descriptive statistics shows the Mean and SD values of body composition of pre-test and post-test of experimental group was 24.60 ± 1.53 and 17.50 ± 1.62 respectively, whereas the Mean and SD values of body composition of pre-test and post-test of control group was 37.09 ± 4.98 and 37.34 ± 6.65 . The "t" value in case of experimental group was 15.79* and for control group it was 0.78. The 't'-value in case of experimental group 15.79* as shown in the table above was found statistically significant ($P < .05$) H_0 (null hypothesis) is rejected at .05 level of significance.

Conclusions

The 4-week yogic practices had significant effect on cardiovascular endurance and body composition, Thus, such yogic practices may be recommended to improve cardiovascular endurance, body composition may contribute to enhance concentration based performance and voluntary control of breathing.

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Practical Applications

- The findings of the study will help to understand the benefits of yoga practices had significant effect on cardiovascular endurance and body composition.
- The present manuscript will also be useful feedback for one and all concerned with these yoga practices group.

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