



## EFFECT OF AEROBIC DANCE AND YOGIC PRACTICES ON CARDIO-RESPIRATORY ENDURANCE OF COLLEGE WOMEN PLAYERS

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**ABSTRACT** The purpose of the present study was to investigate the effect of aerobic dance and yogic practices on cardio-respiratory endurance of college women players. To achieve the purpose of the study Forty Five women players were selected from Sri Krishnasamy College for Women, Chennai, Tamilnadu were selected as subject at random. The subjects age was ranged from 18 to 25 years. The study was formulated as pre and post test random group design, in which forty five were divided into three equal groups. The experimental group – 1 (n=15, AD) underwent aerobic dance, the experimental group-2 (n=15, YP) and group-3 (n=15, CG) served as a control group did not undergo any training. In this study, two training programme were adopted as independent variables, i.e., aerobic dance and yogic practices. The cardio-respiratory endurance was chosen as dependent variable. It was tested by 12 mins run & walk and performance recorded in meters. The selected two treatment groups were performed twelve groups, as per the stipulated training program. The cardio-respiratory endurance was tested by before and after the training period. The collected pre and post data was critically analyzed statistical tool of analysis of covariance, for the observed the significant adjusted post-test mean difference of two different groups. The Scheffe's post hoc test was used to find out pair-wise comparison between groups. To test the hypothesis 0.05 level of significant level was fixed. The result of the present study proved that the two training interventions have produced significant improvements on Cardio-respiratory endurance.

**KEYWORDS :** Aerobic Dance, Yogic Practices And Cardio-respiratory Endurance.

**INTRODUCTION:**

Today, Global recognition of Yoga virtually attracts the attention of intellectuals of varied fields including sports. Worldwide, there seems a considerable rise in scientific research in the field of Yoga. Yoga is a science as well as an art of healthy living physically, mentally, morally and spiritually. It is not limited by race, age, sex, religion, cast or creed and can be practiced by those who want to have a more meaningful life. Yoga is about developing harmony between mind and body. Yoga – is a “science of sciences” is too comprehensive in its nature and too profound in its scope of teachings to be fitted into the frame work of any particular philosophy, religion or belief, ancient or modern” (Taimni, 2005).

Regular aerobic exercise will produce beneficial effects for any age group providing the exercise is specific and appropriate to the level of fitness of the individual. Progressive exercise correctly performed will increase the level of fitness and improve health. It will also create a sense of well -being, produce greater energy and reduce the risk of developing many diseases. Exercise makes demands on the body systems over and above normal every day activities and as result the systems adapt anatomically and physiologically (Rosser, 2001).

**METHODOLOGY:**

The Forty Five women players were selected from Sri Krishnasamy College for Women, Anna nagar, Chennai, Tamilnadu. The study was formulated as pre and post test random group design, in which forty five subject were divided into three equal groups. The experimental group-1 (n=15, AD) underwent aerobic dance the experimental group-2 (n=15, YP) underwent yogic practices and group-3 (n=15, CG) served as a control group did not undergo any training. In this study, two training programme were adopted as independent variable, i.e., aerobic dance and yogic practices. The cardio-respiratory endurance was chosen as dependent variable. It was tested by 12 mins run & walk and recorded meters. The selected two treatment groups were performed twelve weeks, as per the stipulated training program. The condition of Cardio-respiratory endurance was tested before and after the training period. The collected pre and post data was critically analyzed with statistical tool of analysis of co-variance, for observed the significant adjusted post-test mean difference of two groups. The Scheffe's post hoc test was used to find out pair-wise comparisons between groups. The subjects were involved with their respective training for a period of twelve weeks.

**Table-1 The results of analysis of covariance of Cardio-respiratory endurance of different groups (Scores in Meters)**

Test	G-1 (AD)	G-2 (YP)	G-3 (CG)	Source of variance	Sum of square	df	Mean square	'F' ratio
Pre	1633.26	1631.93	1637.27	Within	231.11	2	115.56	0.02
				Between	316774.8	42	7542.26	
Post	1725.2	1703.33	1631.93	Within	71373.91	2	35686.96	6.98*
				Between	214814.67	42	5114.63	
Adjusted Post Test	1725.33	1703.67	1631.46	Within	72429.33	2	36214.67	7.15*
				Between	207617.29	41	5063.84	

\* Significant at 0.05 level of confidence. The required table value for test the significance was 3.22 and 3.23 with the df 2 and 42, 2 and 41

**Results on Cardio-respiratory Endurance**

The pre test mean values on cardio-respiratory endurance G1, G2 and G3 were 1633.26, 1631.93 and 1637.27 respectively. The obtained pre test F value of 0.02 was lesser than the required table F value 3.22. Hence the pre test means value of aerobic dance; yogic practices and control group on cardio-respiratory endurance on before start of the respective treatments were found to be insignificant at 0.05 level of confidence for the degrees of freedom 2 and 42. Thus this analysis confirmed that the random assignment of subjects into three groups were successful.

The post test mean values on cardio-respiratory endurance of G-1, G-2

and G-3 were 1725.2, 1703.33 and 1631.93 respectively. The obtained post test F value of 6.98 was higher than the required table F value of 3.22. Hence the post test means value of aerobic dance; yogic practices and control group on cardio-respiratory endurance on after the treatments were found to be significant at 0.05 level of confidence for the degrees of freedom 2 and 42. The results proved that the selected two training interventions namely aerobic dance and yogic practices were produced significantly altered among the treatment group.

The adjusted post test means on cardio-respiratory endurance scores of G1, G2 and G3 were 1725.33, 1703.67 and 1631.46 respectively. The obtained adjusted post test F value of 7.15 was higher than the required

table F value of 3.23. Hence adjusted post test means value of aerobic dance; yogic practices and control group on Cardio-respiratory endurance were found to be significant at 0.05 level of confidence for the degrees of freedom 2 and 41. The results confirm that the selected two training interventions namely aerobic dance and yogic practices on cardio-respiratory endurance were significantly altered.

**Table-2**  
**The results of Scheffe's Post Hoc test mean differences on Cardio-respiratory endurance among different groups.**  
**(Scores in Meters)**

G-1 (AD)	G-2 (YP)	G-3 (CG)	Mean Differences	Confidence Interval Value
1725.33	1703.67	-	21.67	64.70
1725.33	-	1631.46	93.87*	64.70
-	1703.67	1631.46	72.20*	64.70

\* Significant at .05 level of confidence.

The table 2 shows the paired mean differences of aerobic dance and yogic practices and control group on Cardio-respiratory endurance. The paired wise comparisons results as follows.

**First comparison:** Group 1 and Group 2: The pair wise mean difference of group 1 and group 2 values 21.67 was higher than the confidential interval value of 64.70. Hence the first comparison was insignificant. The results of this comparison clearly proved that aerobic dance have produced significantly different effect on Cardio-respiratory endurance than the yogic practices.

**Second comparison:** Group 1 and Group 3: The pair wise mean difference of group 1 and group 3 values 93.87 was higher than the confidential interval value of 64.70. Hence the second comparison was significant. The results of this comparison clearly proved that aerobic dance have produced significantly different effect on cardio-respiratory endurance than the control group.

**Third comparison:** Group 2 and Group 3: The pair wise mean difference of group 2 and group 3 values 72.20 was higher than the confidential interval value of 64.70. Hence the third comparison was significant. The results of this comparison clearly proved that aerobic dance have produced significantly different effect on cardio-respiratory endurance than the control group.

analyzing statistical end results the researcher found the selected training groups have significantly increased the level of Cardio-respiratory endurance from the base to post interventions. The change from pre to post intervention is as follows.

The aerobic dance group from pre 1633.26 to post 1725.2 and yogic practices group from pre 1631.93 to post 1703.33 have significantly changed the pre and post results. The present study demonstrates the increased level of cardio-respiratory endurance of 5.63 % and 4.38 % for aerobic dance and yogic practices group respectively.

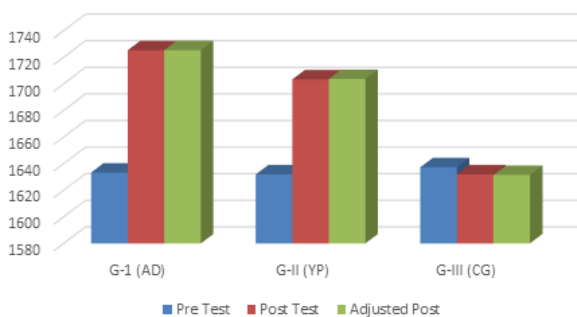
**CONCLUSIONS:**

The results of this study indicate that the selected two training interventions namely aerobic dance and yogic practices would produce significantly altered on cardio-respiratory endurance to the college women players. However the aerobic dance influenced greater development of cardio-respiratory endurance. Further aerobic dance has produced the significant alteration in the condition of cardio-respiratory endurance than the yogic practices.

**REFERENCES:**

1. Rosser, M., 2001. Body Fitness and exercises. 2nd edition, p32
2. Taimini, I. K. (2005). The science of Yoga. The theosophical publishing house, Adyar Chennai P-6.

Cardio Respiratory Endurance



**Figure-1** Bar diagram shows the pre, post and adjusted post test mean values on Cardio-respiratory endurance of different groups (Scores in Meters)

**Discussion on Findings**

The results of the study denotes that the experimental groups namely aerobic dance and yogic practices have significantly differed from the selected dependent variables namely cardio-respiratory endurance compared to the control group. It is also found that the improvement caused by aerobic dance was greater when compared to the effects caused by the yogic practices group and control group.

**cardio-respiratory Endurance**

The end result of the study clearly indicated that, there was a significant difference among the training groups and control group on Cardio-respiratory endurance responses to twelve weeks training intervention among college women players. Further significant improvement has been noticed in the level of Cardio-respiratory endurance between the experimental groups, when compared with the control group. After