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A study of aerobic dancing and yogic practices on selected health related fitness

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Abstract

The purpose of the study was to find out the “Effect of aerobic dancing and yogic practices on selected health related fitness among college women students”. Sixty women students from Savitri bai Phule, Pune University, India were selected at random as subjects. Their age was between eighteen and twenty five years. The study was formulated as pre and posttest random group design, in which sixty students were divided into three equal groups. The experimental group-1 underwent Aerobic Dancing (n=20 AD group), the experimental group -2 underwent Yogic Practices (n= 20 YP group) and group-3 (n=20, CG) served as control group. Aerobic Dancing and Yogic Practices were given as per the training schedule of five days week of twelve week.

In the study, two different training approaches were adopted as independent variables, i.e Aerobic Dacing (AD) and Yogic Practices (YP) were selected as dependent variables. They were listed as follows: 1) Flexibility Measured by Sit and reach test (in centimeters) 2) Cardio Respiratory Endurance was measured by 12 minutes run/walk (in meters) 3) Muscular Strength Endurance was measured by modified sit-ups (in numbers).

The pre and post –test random group design was used as an experimental design in which sixty women college students were selected as subjects from Savitri bai Phule, Pune University, India; the selected subjects were divided into three groups of twenty subjects each. ANCOVA was used to find out significant adjusted post test mean difference of three groups with respect to each parameter and Scheffe’s post hoc was used to find out pair- wise comparisons between groups with respect to each parameter. There were significant differences among the experimental and control groups and there was a significant improvement in Health Related Fitness.

Keywords: Aerobic dance, yogic practice, flexibility, cardio respiratory endurance, muscular endurance

Introduction

Aerobic dance is vigorous, oxygenated large muscle exercise which stimulates heart and lungs activity for a specific period of time brings about beneficial changes in the cardiovascular system. The aerobic Dancing effect depends on the body’s ability to a) rapidly breathe large amount of air b) forcefully deliver large volume of blood, and c) effectively deliver oxygen to all parts of the body. Aerobic dancing is the apt training program to build up fitness of an individual especially girls. It especially involves the continuous rhythmic movement done with music can also be done in Indoor, which helps the girls to improve their physical fitness.

While Yoga is a system of attaining perfect physical and mental health. The body is the temple of soul and to reach harmony of mind, body and spirit, the body must be physically fit. The word “Yoga” is derived from the Sanskrit root “Yuj” meaning to bind, join, attach and yoke to direct and concentrate on one’s attention.

As the students selected for this study belongs to the rural area Mulshi taluks, Pune they do not have any awareness about fitness. Thus the researcher has chosen this training programme yogic practices and aerobic dancing which made them interested for this study.

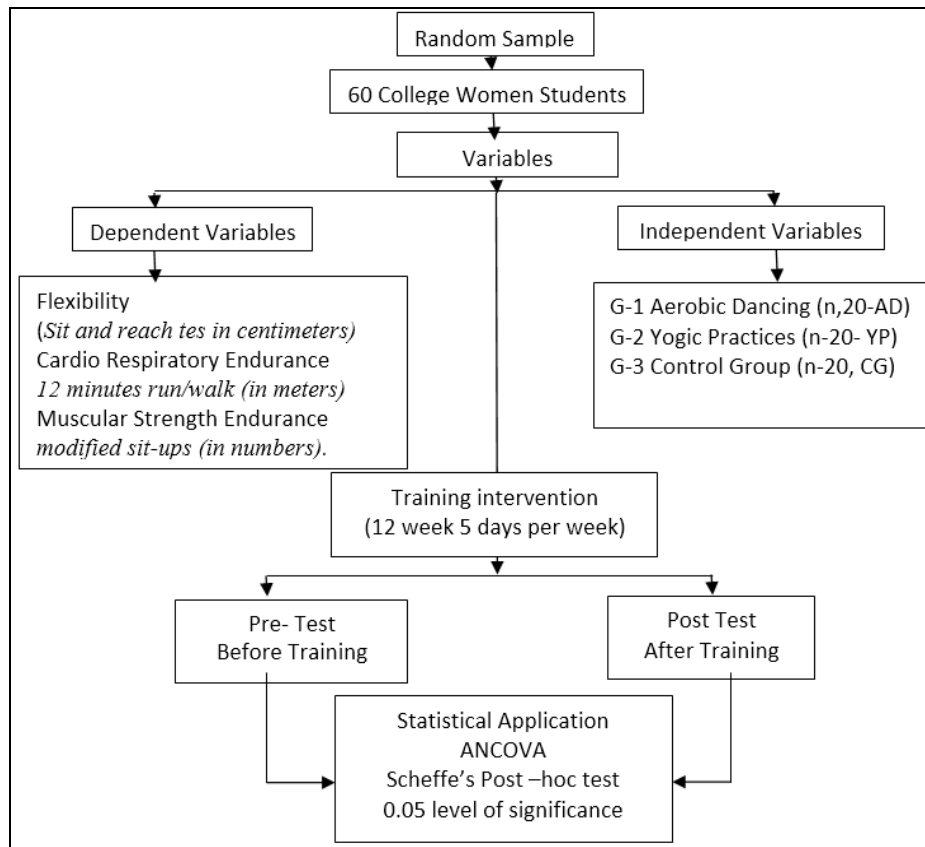
Methods

The study was designed to find out the effect of aerobic dancing and yogic practices on selected health related fitness, among women college students. For this purpose sixty women college students from APA Arts College for Women, Mulshi, Pune (M.S). Were selected at random as subjects and their age was between 18 to 25 years.

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The reliability of the data was established by test and retest process. Test and retest method was followed in order to establish the reliability of data using two groups each with five subjects. All variables selected in the present study were tested twice for the subjects by the same person under similar conditions.

Aerobic Dancing and Yogic practices were given as per the training schedule for Five days per week of twelve weeks. The pre and post test data on the selected criterion variables were collected by administering the test as per the standardized procedures before and after the twelve weeks of training programme. The experimental design used in the study is given in Table-1.



Results

The data on scores of Flexibility, Cardio Respiratory endurance and Muscular Endurance were collected from the

experimental groups and control group. The pre-test, and adjusted post Test mean and standard deviation along with respective ANCOVA table are given in Table-2.

Table 2: Analysis of co Variance of Experimental Groups and Control Group on Flexibility, Cardio Respiratory Endurance and Muscular Endurance

	Test	G-1	G-2	G-3	Source of Variance	Sum of Square	Df	Mean Square	Obtained "F" Ratio
Pre Test									
Flexibility	Mean	31.75	30.90	31.0	Between	8.63	2	4.32	0.69
	SD	2.34	2.53	2.45	within	357.55	57	6.27	
Cardio Respiratory Endurance	Mean	1850	1846	1863.5	Between	3363.33	2	1681.67	0.48
	SD	59.58	39.17	69.45	within	198135.00	57	3476.05	
Muscular Strength Endurance	Mean	12.35	13.10	12.55	Between	6.03	2	3.02	0.83
	SD	1.85	1.79	1.94	within	207.30	57	3.64	
Post Test									
Flexibility	Mean	37.35	39.75	31.15	Between	774.96	2	393.87	76.37*
	SD	2.13	2.00	2.37	within	282.85	57	4.96	
Cardio Respiratory Endurance	Mean	1914	1874.5	1864.5	Between	27403.33	2	13701.67	4.80*
	SD	43.06	38.79	69.10	within	162670	57	2853.86	
Muscular Strength Endurance	Mean	14.00	16.35	12.60	Between	143.63	2	71.82	19.37*
	SD	1.95	1.59	2.06	within	211.35	57	3.71	
Adjusted Post Test									
Flexibility	Mean	36.75	39.75	31.31	Between	774.96	2	387.48	276.12*
					within	78.58	56	1.40	
Cardio Respiratory Endurance	Mean	1916.74	1874.5	1855.56	Between	37542.48	2	18771.24	72.53*
					within	14492.70	56	258.80	
Muscular Strength Endurance	Mean	14.29	16.35	12.71	Between	103.89	2	51.95	77.05
					within	37.76	56	0.67	

*Significant at 0.05 level.

Flexibility: The obtained pre Test F Value of 0.69 was less than the required table F value of 3.16, hence the pre Test means value of flexibility shows insignificant at 0.05 level of confidence for the degrees of freedom 2 and 57.

Cardio Respiratory Endurance: The obtained pre Test F value of 0.48 was less than the required table F value of 3.16. Hence the pre Test means value of cardio respiratory endurance show insignificant at 0.05 level of confidence for the degrees of freedom 2 and 57.

Muscular Strength Endurance: The obtained pre Test F value of muscular strength endurance show insignificant at 0.05 level of confidence for the degrees of freedom 2 and 57.

Thus the results obtained proved that the interventions namely Aerobic dancing and Yogic Practice on Flexibility, Cardio Respiratory Endurance & Muscular strength endurance produced significantly different improvements among the experimental groups.

Further Scheffe's Post Hoc Values of paired mean difference on Flexibility, Cardio- Respiratory Endurance and Muscular Strength Endurance was computed and the results are given in Table -3.

Table 3: Scheffe's Post Hoc Values of Paired Mean Differences on Flexibility, Cardio Respiratory Endurance and Muscular Endurance

Health Related Fitness	Mean Differences			Confidence Interval Value
	G-1 (AD)	G-2 (YP)	G-3 (CG)	
Flexibility	2.80*	5.63*	8.44*	1.10
Cardio Respiratory endurance	42.24*	61.17*	18.94*	14.90
Muscular Strength Endurance	2.06*	1.58*	3.64*	0.76

*Significant at 0.05 level.

Since the obtained mean difference between experimental group and control group were greater than the confidential interval value on flexibility, Cardio Respiratory and Muscular Strength Endurance it was concluded that aerobics dancing group and Yogic practice group improve the flexibility, Cardio Respiratory Endurance and Muscular Strength Endurance better than aerobic dancing group.

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Discussion and Conclusions

The results of the study showed that aerobic dancing and yogic practices produced significant improvement on the selected criterion variables namely flexibility, Cardio Respiratory and Muscular Strength Endurance of women college students when compared with the control group. The results also showed that aerobic dancing has not produced significant improvement than yogic practice on the selected criterion variables namely flexibility, Cardio Respiratory and Muscular Strength Endurance.

Further It Was Concluded That

- Nature of flexibility increased responses goes to yogic practices than aerobic dancing.
- Improvement of Cardio Respiratory endurance is due to aerobic dancing then yogic practices.
- Muscular Strength endurance was improved more because of yogic practices than aerobic dancing
- Reduction of stress level is favorable to yogic practices than Aerobic dancing

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