

Effect of Specific Aerobic Training Program on Selected Health Variables among Women

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Abstract

The purpose of the study was to find out the Effect of Specific Aerobic Training Program on Selected Health Variables among Women. **Sample:** A total of 16 female were selected from Goodways Fitness Aerobic Studio, Geeta Colony, New Delhi as subjects for the study. The age of the subjects were ranging between 18 – 30 yrs. **Tool Used:** Body fat percentage and Body mass index were the selected dependent variables that were assessed by using Omron Karada Body Scan Composition HBF scan body fat analyzer. **Statistical Techniques:** The collected data was analysed using descriptive statistics. The effect of treatment over the period of four months was assessed by employing Repeated Measure ANOVA and post hoc comparisons. The trend in the improvement was analysed by using within subject contrast test. **Conclusions:** it was concluded that the specific aerobic training program may cause decrease in the BMI status of women subjects. But the specific training program did not found efficient that could be suggested to use as body fat reduction program.

Key Words: Aerobic Training Program. Health Variables, Women.

INTRODUCTION

Nature has shaped humans to execute various activities efficiently. Nowadays modernization has through human life of humans easier, as maximum of the work is executed by the machines. The inactive way of life style of man has decreased the efficiency of humans. One of most reliable cause may be the technological advancement. The decreasing trend in working capacity of humans has produced many health related problems such as weakness, illness, chronic diseases, etc. In part our ancestors were quite healthy & fit. The big reason was that, they had to perform a lot of hard physical activity, like running, walking, jumping, etc. The environment in the past was less polluted. Moreover, they had less stresses in their life. Today it is all opposite, i.e., physical activity is less, environment is polluted, unhygienic condition exists all around, life is full of stresses, unbalanced diet, etc. All these factors have reduced the efficiency of humans.

Today, we, especially women in India, desperately require physical fitness not only to improve our health and wellness. Besides, this will also benefit to advance healthy environment around us along with community health, thus nation will be benefitted. By the physical fitness programmes, we can benefit the women with good fitness, wellness and health.

The importance of a well-planned training schedule is inevitable for anyone who opts to start exercise for certain reason. When it is about overall fitness of a woman from general population who work outs in the group, it becomes further difficult to develop a training schedule for group due to a principle of training i.e. Principle of Individual Differences. Training schedule designed for a group of people does not give same benefits for every individual.

But, it is advantageous in term of providing a mean to target large number of people to carry out a fitness regime. Researcher has not ignored the pros and cons of designing a conditioning programme leading to betterment of physical fitness. Although, segregating group on the basis of age can help to design such workout even for a huge group.

It is the ability of an individual to do carry out daily routine task effectively with joy and pleasure. After the work is over, he still has sufficient capacity to do more work without any exertion. Moreover, his recovery is faster and quicker.

There are differences in opinion regarding views on physical fitness. Some consider it is associated to task or work. Some consider it as ideal body shape or physique. Many say it is efficient functioning of physiological aspect of our body. Whereas, it is a term with wide meaning. It is much more than the possession of strength, speed and endurance. The individual who show case the quality such as spirited, passionate and joyful in performing his task is termed to be physically fit. Thus it is physical working efficiency of an individual. The physical fitness differs from individual to individual. It rest on the kind of work, size, shape, structure, age, sex and adaptability of an individual.

Aerobics is a form of physical exercise that combines rhythmic aerobic exercise with stretching and strength training routines with the goal of improving all elements of fitness (flexibility, muscular strength, and cardio-vascular fitness). It is usually performed to music and may be practiced in a group setting led by an instructor (fitness professional), although it can be done solo and without musical accompaniment. With the goal of preventing illness and promoting physical fitness, practitioners perform various routines comprising a number of different dance-like exercises. Formal aerobics classes are divided into different levels of intensity and complexity. A well-balanced aerobics class will have five components: warm-up (5-10 minutes), cardio vascular conditioning (25-30 minutes), muscular strength and conditioning (10-15 minutes), cool-down (5-8 minutes) and stretching and flexibility (5-8 minutes). Aerobics classes may allow participants to select their level of participation according to their fitness level. Many gyms offer a variety of aerobic classes. Each class is designed for a certain level of experience and taught by a certified instructor with a specialty area related to their particular class.

PROCEDURE AND METHODOLOGY

Sample

A total of 16 female were selected from Goodways Fitness Aerobic Studio, Geeta Colony, New Delhi as subjects for the study. The age of the subjects were ranging between 18 – 30 yrs.

Tool Used

Body fat percentage and Body mass index were the selected dependent variables that were assessed by using Omron Karada Body Scan Composition HBF scan body fat analyzer.

Collection of Data

The data for research was collected on Repeated Measure Design in which a pre-test was calculated first. Thereafter, the same test was conducted after every one month of the training for the duration of four months. In all, there were 5 data collection i.e. before the commencement of training, after one month, after two months, after three months and after four months of training.

Statistical Techniques

The collected data was analysed using descriptive statistics. The effect of treatment over the period of four months was assessed by employing Repeated Measure ANOVA and post hoc comparisons. The trend in the improvement was analysed by using within subject contrast test. All the techniques were employed by using SPSS (version 16).

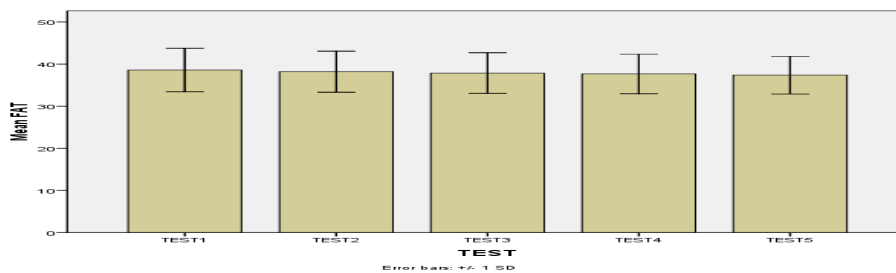
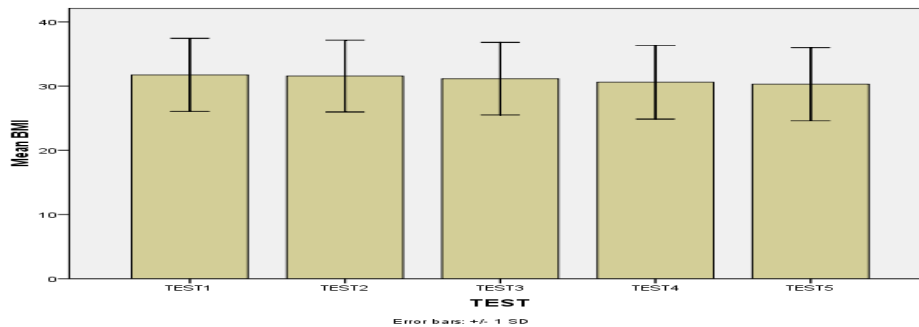
RESULTS AND DISCUSSIONS

After the collection of data, the appropriate statistical technique was used for the analyses and findings of the study has been represented below:

Table 1 Descriptive Statistics for BMI

Test	BMI		BODY FAT	
	Mean	Std. Error	Mean	Std. Error
1	31.744	1.425	38.594	1.294
2	31.569	1.398	38.181	1.220
3	31.156	1.411	37.869	1.210
4	30.606	1.436	37.669	1.175
5	30.300	1.428	37.369	1.119

The descriptive statistics represented the mean value of BMI and Body Fat Percentage of various test conducted i.e. pretest, after one month of training, after two months of training, after three months of training and after four months of training and they were named as Test 1, Test 2, Test 3, Test 4 and Test 5 respectively. The BMI was found to be 31.744, 31.569, 31.156, 30.606 and 30.300 for Test 1, Test 2, Test 3, Test 4 and Test 5 respectively. Whereas, the mean value for the same was found to be 38.594, 38.181, 37.869, 37.669 and 37.369.



Thereafter, Repeated Measure ANOVA was calculated and result has shown below.

Table 2 Mauchly's Test of Sphericity^b

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon ^a		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
BMI	.023	50.467	9	.000	.379	.413	.250
FAT	.036	44.468	9	.000	.395	.434	.250

The Mauchly's test indicated that the assumption of sphericity had been violated, $\chi^2(9) = 50.467$, $p = 0.000$ for BMI and $\chi^2(9) = 44.468$, $p = 0.000$ for Body Fat Percentage. As the assumption of sphericity had been violated and the ϵ was found to be < 0.75 in both the cases, the Greenhouse-Geisser was considered to make correction in degree of freedom.

Tests of Within-Subjects Effects						
Source		Type III Sum of Squares	Df	Mean Square	F	Sig.
BMI	Greenhouse-Geisser	24.288	1.516	16.018	11.474	.001
Error(BMI)	Greenhouse-Geisser	31.752	22.744	1.396		
FAT	Greenhouse-Geisser	14.248	1.580	9.017	3.333	.063
Error(FAT)	Greenhouse-Geisser	64.132	23.701	2.706		

From the tests of within-subjects effects table, the following adjustment was made in the degree of freedom: For BMI the adjustment was $F(1.516, 22.744) = 11.474$, $p < 0.05$ and for Body Fat Percentage, it was $F(1.580, 23.701) = 3.333$, $p < 0.05$. The calculated F-value were found to be significant at 0.05 level of significance. The post hoc comparisons made thereafter revealed that the BMI of subjects reduced significantly due to specific aerobic training for the duration of four months. In the case of Body Fat Percentage, the specific aerobic training was not efficient enough to give positive results.

CONCLUSIONS AND RECOMMENDATIONS

After the analysis of results and discussion on finding made by scholar, it was concluded that the specific aerobic training program may cause decrease in the BMI status of women subjects. But the specific training program did not found efficient that could be suggested to use as body fat reduction program. Therefore, the scholar has drawn the following recommendation: first, the specific aerobic training program need to be redesigned for fat reduction. Second, the effect of same program can be studied on male subjects. Third, more health variables can be included in further research.

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