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## Effect of aerobics dance training on selected physical fitness variables of college women

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### Abstract

This study was investigated the impact of aerobic dance on selected physical parameters of college women. To achieve the purpose of the study 40 college women were selected from Navarasam College. The subjects was randomly assigned to two equal groups (n=20). Group- I underwent aerobic dance (ADG) and group - II was acted as control group (CG). The aerobic dance was given to the experimental group for 3 days per week (Monday, Wednesday and Friday) for the period of twelve weeks. The control group was not given any sort of training except their routine work. The physical parameters of flexibility (sit and reach test) before and after training period. The data collected from the subjects was statistically analysed with 't' test to find out significant improvement if any at 0.05 level of confidence. The result of the present study aerobic dance significantly improved flexibility of college women.

**Keywords:** Aerobic dance, flexibility and college women

### Introduction

Aerobics, meaning "with oxygen," refers to physical exercise to improve cardio respiratory endurance. Aerobic movement is rhythmic and repetitive, engaging the large muscle groups in the arms and legs for at least twenty minutes at each session. The ensuing demand for a continuous supply of oxygen creates the aerobic training effect, physiological changes that enhance the ability of the lungs, heart, and blood vessels to transport oxygen throughout the body. The most beneficial aerobic exercises include cross-country, swimming, running, cycling, walking, and aerobic dance. Activities that rely on brief or discontinuous bursts of energy, such as weight lifting, are anaerobic "without oxygen". Aerobic dance is the fitness sport that combines the health and figure benefits of jogging with the fun of dancing. Aerobic dancing is a fun way to get fit. It combines fat burning aerobic movements, muscle building exercises and stretching into routines that are performed according to music. Aerobic dancing is challenging for college level boys. They fell as though they were performing, while firming up their body and strengthening their cardiovascular system. Aerobic dancing is a series of callisthenic exercise movements, accompanied by music, the use of music is a technique of motivation that has been increased in recent years. Aerobic dance is essential to a healthy cardiovascular system. Briefly, aerobic dance is an activity that can be sustained for an extended period of time without building and oxygen debt in the muscles. It is a type of dance that overloads the heart and lungs and causes them to work harder than they do when a person is at rest. Aerobic literally means "with air". Aerobic dance is the type of activity in which the amount of oxygen taken in equal to the amount of oxygen required.

### Methodology

In this study the selected 40 obese college girls selected from Navarasam college Coimbatore. The subjects were randomly assigned in to two equal groups namely, aerobic dance group (ADG) (n=20) and Control group (CG) (n=20). The respective training was given to the experimental group the 3 days per weeks (alternate days) for the training period of twelve weeks. The control group was not given any sort of training except their routine. The evaluated physical parameters were flexibility was assessed by sit and reach test and the unit of measurement was in centimetre.

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**Training programme**

The training programme was lasted for 60 minutes for session in a day, 3 days in a week for a period of 12 weeks duration. These 60minutes included 10 minutes warm up, aerobic dance for 25 minutes and 10 minutes warm down. The equivalent in aerobic dance is the length of the time each action in total 3 day per weeks (Monday, Wednesday and Friday).

**Statistical analysis**

The collected data before and after training period of 12 weeks on the above said variables due to the effect of aerobic dance was statistically analyzed with ‘t’ test to find out the significant improvement between pre and post test. In all cases the criterion for statistical significance was set at 0.05 level of confidence. ( $p < 0.05$ )

**Table 1:** Computation of ‘T’ ratio on selected physical parameters on experimental group and control group (Scores in numbers)

Group	Variables	Mean	N	Std. Deviation Pre	Std. Deviation Post	T ratio	
Flexibility	Experimental Group	Pre test	6.05	20	1.70	1.53	27.60*
		Post test	7.95	20			
	Control Group	Pre test	5.70	20	1.03	0.99	
		Post test	5.55	20			

\*significant level 0.05 level degree of freedom (2.09, 1 and 19)

Table 1 reveals the computation of mean, standard deviation and ‘t’ ratio on selected physical parameters namely flexibility experimental group. The obtained ‘t’ ratio on agility and flexibility were 27.60 respectively. The required table value was 2.09 for the degrees of freedom 1and 14 at the 0.05 level of significance. Since the obtained ‘t’ values were greater than the table value it was found to be statistically significant.

Further the computation of mean, standard deviation and ‘t’ ratio on selected physical parameters namely flexibility control group. The obtained ‘t’ ratio on agility and flexibility were 1.37 respectively. The required table value was 2.14 for the degrees of freedom 1and 14 at the 0.05 level of significance. Since the obtained ‘t’ values were lesser than the table value it was found to be statistically not significant.



**Fig 1:** Bar diagram showing the mean value on Flexibility of obese college Girls on Experimental and Control group (Scores in numbers)

**Discussion and Findings**

The present study experimented the effect of aerobic dance training on physical parameters of college women. The result of the study shows that the aerobic dance training improved the flexibility. The findings of the present study had similarity with the findings of the investigations referred in this study. However, there was a significantly changes of subjects in the present study the agility and flexibility was significantly improved of subject in the group may be due to the in aerobic dance. Hopkins *et al.*, (1990) <sup>[1]</sup> reported that 12 weeks of low impact aerobic dance, the group improved significantly on all functional fitness components. Vairavasundaram *et al.*, (2014) <sup>[2]</sup> showed that significant improvement in all the selected physical variables namely agility, explosive power, muscular strength endurance and flexibility among handball players. Chanelle *et al.*, (2009) <sup>[9]</sup> concluded that the aerobic-based physical activity programme improved aerobic endurance, muscular strength and muscular endurance, and the tone of the body.

**Conclusions**

It was concluded that 12 weeks twelve weeks aerobic dance significantly improved the flexibility of college women.

**References**

- Hopkins DR. Effect of low-impact aerobic dance on the functional fitness of elderly women. *J Strength Cond.* 1990;6(2):63-74.
- Vairavasundaram C, Palanisamy A. Impact of aerobic dance on selected physical components of intercollegiate handball players. *Star Int J.* 2014;2(10):7.
- Mathewos Hosiso, Sangeeta Rani, Shemelis Rekoninne. Effect of aerobic exercise on improving health-related physical fitness components of Dilla University sedentary female community. *Int J Sci Res Pub.* 2013;3(12).
- Keogh JWL, Kilding A, Pidgeon P, Ashley L, Gillis D. Physical benefits of dancing for healthy older adults. *J Aging Phys Act.* 2009;17:1-23.

5. Kemp C, Pienaar AE. Effect of an aerobic-based physical activity program on physical fitness of 10-15-year-old girls. *Afr J Phys Health Educ Recreat Dance (AJPHERD)*. 2009;15(4):527-542.
6. Jahan FM. Impact of aerobics and step aerobics training on selected health-related fitness and physiological variables among obese students.
7. Awol EM, Ayalew AP, Mekonnen SP. Impact of aerobic dance on selected motor fitness variables of male students in Fonko High School, Ani Lemo Hadiya Zone, SNNPR, Ethiopia [dissertation]; c2021.
8. Yassin Ali E, Mekonen S. Effect of aerobic exercises on some selected health-related physical fitness of female students: The case of Kutaber Secondary School; South Wollo Zone Amhara Regional State; Ethiopia [dissertation, Haramaya University]; c2021.
9. Laude SC. Channele Gordon, Ph.D. University of California, Berkeley; c2017.