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Effect of aerobics dance with yoga on physical parameters of school girls

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Abstract

This study was investigated the impact of aerobic dance with yoga practice on selected physical parameters of school girls. To achieve the purpose of the study 40 school girls were selected from Sri Saratha Vidhayalaya higher secondary school Salem. The subjects was randomly assigned to two equal groups (n=20). Group- I underwent aerobic dance with yoga practice (ADWYG) and group - II was acted as control group (CG). The aerobic dance with yoga Practices 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) and the cardiorespiratory endurance (9 minutes run and walk) before and after training period. The data collected from the subjects was statistically analyzed with 't' test to find out significant improvement if any at 0.05 level of confidence. The result of the present study aerobic dance with yoga practices significantly improved flexibility and cardiorespiratory endurance of school girls.

Keywords: Aerobic dance with yoga practices, flexibility, cardiorespiratory endurance

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. (Sorensen and Jackie, 1972).

Yoga has been practised in India for over two millennia. Stories and legends from ancient times testify to the existence of yoga, and to the practitioners and divinities associated with it. Indian literature is a storehouse of knowledge about yoga covering every conceivable level. Roughly in chronological order are the vocals (books of Scriptural knowledge), the Upanishada (philosophical cosmologies), and their commentaries; then the Puranas (ancient cosmologies), and the two epics, the Ramayana and the Mahabharatha. The Mahabharatha contains within itself that masterpiece of Indian scripture the Bhagavad Gita.

Towards the end of Vedic period comes the aphoristic literature, with the “Yoga Aphorisms” of Patanjali of special interest to yoga students. These are, besides, whole bodies of works both ancient (Pre-Christian) and more modern dealing with various aspects of yoga and yoga philosophy, testifying to the continued relevance of yoga as a discipline (Mira-Mehta, 1994).

Methodology

In this study the selected 40 school girls selected from Sri Saratha Vidhayalaya higher secondary school Salem. The subjects were randomly assigned in to two equal groups namely, aerobic dance with yoga Practices group (ADWYG) (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 cm, cardiorespiratory endurance was

assessed by 9 minutes run and walk and the unit of measurement was in meters.

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 Yoga practice for 25 minutes and warm down. The equivalent in aerobic dance with yoga 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 posttest. 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	
Experimental Group	Flexibility	Pre test	6.05	20	1.70	1.53	27.60*
		Post test	7.95	20			
	Cardio respiratory endurance	Pre test	716.25	20	21.57	23.03	38.43*
		Post test	748.15	20			
Control group	Flexibility	Pre test	5.70	20	1.03	0.99	1.37
		Post test	5.55	20			
	Cardio respiratory endurance	Pre test	716.50	20	16.31	17.34	1.37
		Post test	715.75	20			

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

Table I reveals the computation of mean, standard deviation and ‘t’ ratio on selected physical parameters namely flexibility and cardiorespiratory endurance experimental group. The obtained ‘t’ ratio on flexibility and cardiorespiratory endurance were 27.60 and 38.43 respectively. The required table value was 2.09 for the degrees of freedom 1 and 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 and cardiorespiratory endurance control group. The obtained ‘t’ ratio on flexibility and cardiorespiratory endurance were 1.37 and 1.37 respectively. The required table value was 2.14 for the degrees of freedom 1 and 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.

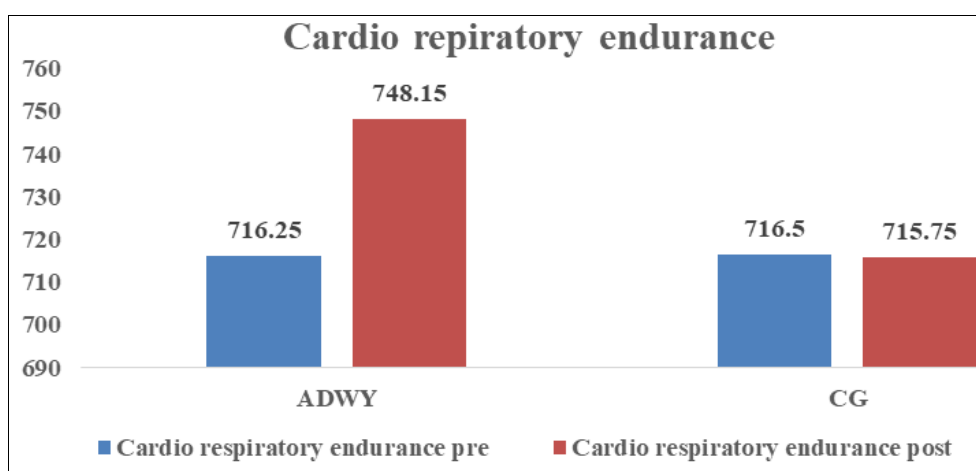


Fig 1: Bar diagram showing the mean value on Cardio respiratory Endurance of School Girls on Experimental and Control group (Scores in numbers)

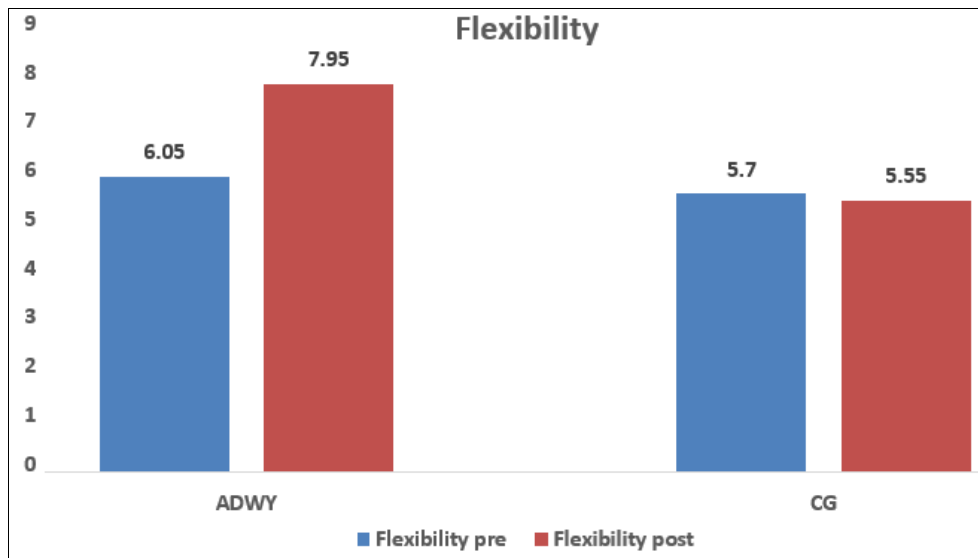


Fig 2: Bar diagram showing the mean value on Flexibility of School Girls on Experimental and Control group (Scores in numbers)

Discussion and findings

The present study experimented the effect of aerobic dance training with yoga on physical parameters of school girls. The result of the study shows that the aerobic dance training with yoga Practice improved the flexibility and cardiorespiratory endurance. 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 flexibility and cardiorespiratory endurance was significantly improved of subject in the group may be due to the in aerobic dance with yoga. Hopkins *et al.*, (1990) ^[1] reported that 12 weeks of low impact aerobic dance, the group improved significantly on all functional fitness components. Vairavasundaram *et al.*, (2014) ^[2] showed that significant improvement in all the selected physical variables namely agility, explosive power, muscular strength endurance and flexibility among handball players. Mathewos *et al.*, (2013) ^[3] evaluated that aerobic exercise has positive effect on improvement of cardiovascular endurance, muscular strength, muscular strength and flexibility. Justin *et al.*, (2009) ^[4] investigated that best to structure dance programs for older adults to maximize gains in physical function while ensuring participant safety and enjoyment. Chanelle *et al.*, (2009) ^[5] concluded that the aerobic-based physical activity programme improved aerobic endurance, muscular strength and muscular endurance, and the tone of the body.

Conclusions

1. It was concluded that 12 weeks twelve weeks aerobic dance with yoga practice significantly improved the flexibility and cardiorespiratory endurance of school girls.

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