

The Purpose of the study was to compare cardiovascular endurance between female individuals practicing panayama and walkers of Vidyavardhaka College of Engineering, Mysuru.

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Abstract - The purpose of the present study was to compare the level of cardiovascular endurance among those who practice pranayama regularly and daily walkers of the Vidyavardhaka campus students of Mysore. For the collection of data, 25 samples are selected from both yoga trainees and walkers of the college campus students, respectively. The randomly chosen samples belong to various departments of the Vidyavardhaka Institution campus, students of Mysore. This study was related to breathing and the cardiac respiratory system of pranayama. Representative samples belong to the age group of 18-25 years. The collected data was statistically analysed. To achieve meaningful conclusions, the mean, standard deviation, and t-test were calculated and represented through suitable figures and tables. The researcher concludes that there is a major difference in the selected variables. Female yoga trainees have more cardiovascular endurance compared to female walkers, and also they stay a little closer to those who practice pranayama.

Keywords: Pranayama, walkers, the level of cardiovascular endurance, Vidyavardhaka College of Engineering, Mysuru.

1. INTRODUCTION

Yoga is the only science that takes care of the all-round development of three essential elements- body, mind and soul together. Yogic Practice is a holistic science that includes the culture of the body, the mind, as well as the spiritual. Pranayama was a part of yoga.

The word yoga is derived from the Sanskrit word 'yuj', which means 'to unite or to integrate'. It is all about harmonising the body, mind and breath through the means of various breathing exercises, yoga poses and meditation. As per the yogic scriptures, the practice of yoga leads to the union of individual consciousness with universal consciousness, indicating a perfect harmony between mind and body and man and nature. Yoga is the path as well as the aim of human life. Maharshi Patanjali, the Father of Yoga, systematically compiled various aspects of yoga. According to philosophy, 'yogas chitta, vritti, nirodha' refers to experiencing ultimate reality and self-realisation. He has described Ashtanga yoga for each and every population, and it may be common people, saints, sagas or very active people.

Pranayama is the ancient yogic practice of controlling and regulating the breath to enhance mental, physical, and spiritual well-being. It is considered the fourth limb of yoga and acts as a bridge between the body and mind, helping to cleanse energy channels (nerves) and prepare the practitioner for meditation of yoga.

Regular physical activity is proven to help prevent and manage non-communicable diseases such as heart disease, stroke, diabetes and several cancers. It also helps prevent hypertension, maintain a healthy body weight and can improve mental health, quality of life and well-being. pranayama practice has multiple physiological benefits, including a decrease in blood pressure, an increase in respiratory rate and an increase in heart rate and improves autonomic nervous system by modulating parasympathetic and sympathetic activities, cardiovascular functions, and respiratory functions, decreases the effect of stress and strain of body and improves overall mental and physical health.

Cardiovascular endurance is the most essential because blood vessels and the heart supply blood to the important organs and muscles of the human body. Furthermore, blood carries oxygen, and oxygen is most imperative for us to stay active. So, maintaining cardiovascular endurance helps to increase the ability of the heart and blood vessels to transport oxygen-rich blood to the organs and muscles of the human body. It improves the ability of the muscles to use

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oxygen to produce energy for functioning. Cardiovascular endurance is essential for both a healthy heart and mind of the human body.

OBJECTIVES

To assess the development cardiovascular endurance system between female individuals practicing pranayama and regular walkers of Vidyavardhaka College of Engineering campus students of Mysuru.

METHODOLOGY/DESIGN

This was a comparative study conducted over female (N=25) pranayama practitioners as well as female (N=25) regular walkers of Vidyavardhaka College of Engineering campus students of Mysuru. Their age ranged between 18 to 25 years. The subjects for the study were selected through a purposive random technique. The subjects were practising walkers in the ground and practicing pranayama in Yoga center in college campus.

Equipment: Step or platform 20 inches/50.8 cm high, metronome mobile app, one speaker and a stopwatch stethoscope was also used in this test.

Harvard step test (Brouha *et al.*, 1943)

The subject repetitively steps on and off a platform in a sequence in less than two seconds, which translates to pranayama practitioners and daily walkers of college campus students taking 30 steps per minute and continuing at this pace for five minutes or until exhaustion. For females, the platform should be 20 inches tall, or 51 cm, high. The chosen speed may be assured in peace with the test standards by employing a 3 metronome mobile app and speaker. When an athlete is exhausted, they are unable to maintain their marching pace for another 15 seconds. The individual was trained to sit down as soon as the test was over, and from that point on, the total number of heartbeats was checked 1, 2, and 3 minutes after the exam was finished. The phrase "short form test" refers to the heart rate counting that ranges from 1 to 1.5. Under the lengthy variant of the test, further heartbeat counting is anticipated to occur between 2 and 2.5 and 3 to 3.5 minutes later.

STATISTICAL TECHNIQUES

Statistics like Mean, Standard Deviation and other suitable statistics were employed in the present investigation. In order to test the hypotheses formulated for the present investigation, 't' test for independent variables was employed. The level of significance was .05 level.

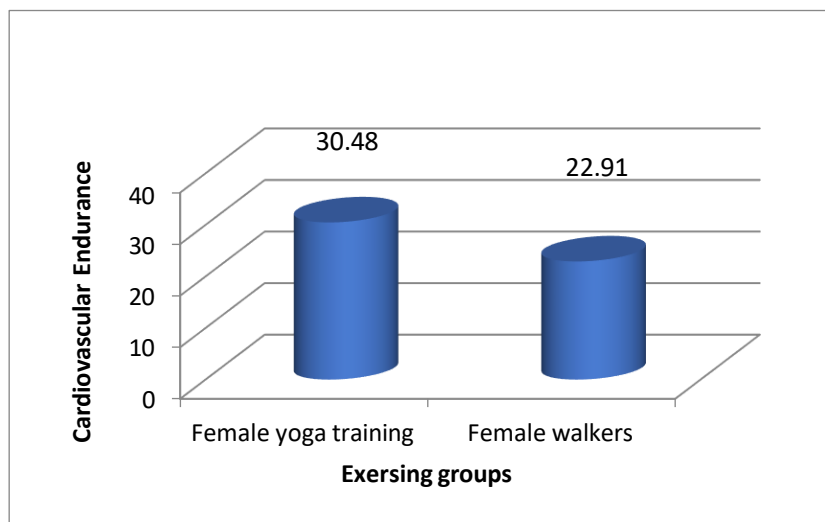
Table 1. The summary of cardiovascular endurance between female individuals practicing pranayama and walkers of Vidyavardhaka College of Engineering, Mysuru.

cardiovascular endurance	N	Mean	Standard deviation
Pranayama practicing females individual	25	30.48	8.89
Walking female individual	25	22.91	9.66

From Table 1, it becomes clear that the results are normally distributed with acceptable homogeneity displayed in terms of standard deviation. The cardiovascular endurance in regularly practicing pranayama individuals is 30.48 ± 8.89 , and that of regularly walking individuals is 22.91 ± 9.66 ; it compares to the significant level scores of walkers to regular

pranayama practicing students, so for better on this topic.

Figure 1. Cardiovascular endurance between female individuals practicing pranayama and walkers of Vidyavardhaka College of Engineering, Mysuru.



The raw scores on cardiovascular endurance in the women's section were further subjected to an independent sample t-test in order to find differences in mean scores between regular pranayama practicing individuals and regular Walking individuals of our college campus students.

Table 2. Summary of t-test on selected variables between pranayama practicing individuals and Walking individuals in the female section

Variables	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Cardiovascular endurance	1.329	48	.190	2.56000	1.92646

Table 2 provides results on 't' test for Cardiovascular endurance (1.329), The t-values of Cardiovascular endurance are not significant at .05 levels of significance.

DISCUSSION

Similarly, Parshad *et al.*[15] studied the impact of pranayama on hemodynamic function in healthy medical students and found its improvement after 6 weeks of practice encompassing asanas/postures, pranayama/breathing, and dhyana/meditation.

The results are consistent with data from Chen *et al.*[10] reported a positive influence of pranayama on physical fitness and health-related (e.g., body composition, cardiovascular-respiratory functions).

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CONCLUSION

In today's society, obesity is becoming a significant health concern for all age groups, leading to various health issues. Excess body fat normally builds up due to the consumption of more calories than expended. Physical exercise, practicing yoga, pranayama and sports can burn calories and control excess body fat buildup in the body, which can prevent and control obesity. We found that pranayama practices and physical exercise walkers both have a significant impact on cardiorespiratory endurance, and both exercises have a similar effect on cardiorespiratory endurance, but compared to regular pranayama practice, its improve to daily walkers of our college campus female students.

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