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Effect of pranayama practices on selected physical fitness variables among women cricketers

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Abstract

The purpose of the study was to investigate the changes on selected health related physical fitness after twelve weeks of pranayama practices among women cricketers. To achieve the purpose of the study, thirty women cricketers from various classes and departments from Annamalai University, Chidambaram, Tamil Nadu, India were selected as subjects at random in the age group of 18 years to 25 years. The selected subjects were randomly assigned into two groups of 15 each, in which, group – I (n = 15) underwent pranayama practices, group – II (n = 15) acted as control which did not participate in any special training. The training program was carried three days per week for twelve weeks (alternative days). Prior to and after the training period the subjects were tested for, cardio respiratory endurance and muscular strength endurance. Cardio respiratory endurance was measured by cooper's 9 minutes run / walk test muscular strength endurance measured by bent knee sit-ups. The statistical tool used for the present study is 't' ratio. The result of the study was a significant improvement on cardio respiratory endurance and muscular strength endurance after twelve weeks of pranayama practice. However the improvement was favour of experimental group. There was a significant difference was occurred between pranayama practice group and control group after twelve weeks of pranayama practice.

Keywords: pranayama practice, cardio respiratory endurance and muscular strength endurance

Introduction

Yoga helps to tone up the entire body to regularize blood compositions and improve blood circulations, tones up glands and visceral muscles. Regular practice of yoga helps to keep our body fit, controls cholesterol level, reduces weight, normalizes blood pressure and improves heart performances. Further, preliminary studies in the United States and India suggest that yoga may be helpful for specific conditions, such as asthma, epilepsy, anxiety, stress and others. Regular exercise results in an increase in the blood flow and improves oxygen carrying and waste removal capacity and further increases work load capacity.

Pranayama is the fourth "anga" in Raja yoga. Pranayama means breath control. In other words it is the control of air by means of inhalation holding the air and exhalation. Mainly the pranayama is used to prepare the mind for meditation.

Statement of the Problem

To achieve the purpose of the study to find out the effect of pranayama practices on selected physical fitness variables among women cricketers.

Methodology

To achieve the purpose of the study, thirty women cricketers from various classes and departments from Annamalai University, Chidambaram, Tamil Nadu, India were selected as subjects at random in the age group of 18 years to 25 years. The selected subjects were randomly assigned into two groups of 15 each, in which, group – I (n = 15) underwent pranayama practices, group – II (n = 15) acted as control which did not participate in any special training. The training program was carried three days per week for twelve weeks (alternative days). Prior to and after the training period the subjects were tested for, cardio respiratory endurance and muscular strength endurance. Cardio respiratory endurance was measured by cooper's 9 minutes run / walk test muscular strength endurance measured by bent knee sit-ups.

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Analysis of Data

The pre and post test data collected from the experimental and control groups on cardio respiratory endurance and muscular

strength endurance were statistically analyzed by dependent 'T' test and the results are presented in table-I.

Table 1: Analysis of Data

Variable Name	Group Name	Control Group	Pranayama Practice	F ratio
Cardio-respiratory Endurance	Pre-test Mean \pm S.D	1136.06 \pm 33.34	1135.80 \pm 30.10	3.01
	Post-test Mean \pm S.D.	1139.93 \pm 27.34	1237.46 \pm 30.41	08.56*
	Adj.Post-test Mean \pm S.D.	21.42	1198.32	131.15
Muscular Strength Endurance	Pre-test Mean \pm S.D	20.46 \pm 1.12	20.73 \pm 1.03	2.17
	Post-test Mean \pm S.D.	20.26 \pm 1.09	23.93 \pm 1.27	8.93*
	Adj.Post-test Mean \pm S.D.	20.40	22.56	85.25

* (The required table value for significance at 0.05 level of confidence with degrees of freedom 1 and 27 is 4.21 and degree of freedom 1 and 28 is 4.20.)

*Significant at .05 level of confidence

The obtained 'f' ratio value is 08.56 of cardio respiratory endurance was greater than the required table value of 4.21 for the degrees of freedom 1 and 27 at 0.05 level of confidence. Hence it was concluded that due to the effect of twelve weeks of pranayama practice the cardio respiratory endurance of the subjects was significantly improved.

The obtained 'f' ratio value is 08.93 of muscular strength endurance was greater than the required table value of 4.21 for the degrees of freedom 1 and 27 at 0.05 level of confidence. Hence it was concluded that due to the effect of twelve weeks of pranayama practice the muscular strength endurance of the subjects was significantly improved.

Conclusions Based on the results of this study the following conclusions were drawn by the investigator It was concluded that the selected criterion variables such as cardio respiratory endurance and muscular strength endurance were significant difference between pranayama practice group and control group of women cricketers.

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