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Dr. P Kanagasabai

Professor of Physical Education
(Retd), Annamalai University,
Chidambaram, Tamil Nadu,
India

Dr. S Manikandan

Professor, Department of
Physical Education, Tamilnadu
Physical Education and Sports
University, Chennai, Tamil
Nadu, India

Dr. C Lakshmanan

Assistant Professor, Department
of Physical Education,
Tamilnadu Physical Education
and Sports University, Chennai,
Tamil Nadu, India

Influence of selected yogic practices and aerobic exercises on selected physiological variables among middle aged diabetics

Dr. P Kanagasabai, Dr. S Manikandan and Dr. C Lakshmanan

Abstract

The purpose of the study was to find out the influence of combination of selected yogic practices and aerobic exercises on selected physiological variables such as cardio respiratory endurance and vital capacity among middle aged diabetics. To achieve this purpose, thirty diabetic patients worked in different places of chidambaram, tamilnadu, were selected as subjects, their aged between 35 to 45 years. The selected subjects were divided into two equal groups of fifteen subjects each, namely experimental group and control group. Experimental group, performed yogic practices and aerobic exercises, after a warm up for 5 minutes underwent their respective training and finished each session with cool down exercises and the sessions lasted for 45 minutes in each day, on alternate days, forming three days a week for eight weeks. Physiological Variables such as Cardio respiratory endurance and Vital capacity were selected as criterion variables and they were tested by using Cooper's 12 minutes run/walk test and spirometer respectively. ANCOVA was used to find out the significant difference if any between the groups. The results of the study showed that there was a significant differences on cardio respiratory endurance and vital capacity between experimental group and control group and also there was a significant improvement on cardio respiratory endurance and vital capacity due to eight weeks of combination of selected yogic practices and aerobic exercises.

Keywords: yogic practices, aerobic exercises, physiological, cardio respiratory endurance and vital capacity

Introduction

Yoga strives to increase self-awareness on both physical and psychological level. Psychological problems such as anxiety and stress are an unavoidable reality of life in today's world. You can't beat it entirely, and you can't live without it. The goal of managing these problems isn't to be completely without the physiological and psychological problems. Sports pervade society to such an extent that it has been described by many as a microcosm of society. Training and conditioning enables an athlete to complete at a higher level and prepares him for other events by getting fit and strong and by improving his fitness. A training individual is in a better state of physical fitness than the individual who follows a sedentary, and inactive life.

Yogic techniques and practices aim at selective as well as wholesome shaping of human body and mind. In this study only pranayama practice is taken into account as a treatment variable. Breath is a life force for the human being. It is believed that the lung functions play a vital role in most of the sports activities.

Methodology

The purpose of the study was to find out the influence of combination of selected yogic practices and aerobic exercises on selected physiological variables such as cardio respiratory endurance and vital capacity among middle aged diabetics. To achieve this purpose, thirty diabetic patients worked in different places of chidambaram, tamilnadu, were selected as subjects, their aged between 35 to 45 years. The selected subjects were divided into two equal groups of fifteen subjects each, namely experimental group and control group. Experimental group, performed yogic practices and aerobic exercises, after a warm up for 5 minutes

Correspondence

Dr. P Kanagasabai

Professor of Physical Education
(Retd), Annamalai University,
Chidambaram, Tamil Nadu,
India

underwent their respective training and finished each session with cool down exercises and the sessions lasted for 45 minutes in each day, on alternate days, forming three days a week for eight weeks. Physiological Variables such as Cardio respiratory endurance and Vital capacity were selected as criterion variables and they were tested by using Cooper's 12 minutes run/walk test and spirometer respectively. The control group did not participate in any specialized training during the period of study.

Results

The experimental design used for the present investigation was random group design involving 30 subjects for training effect. Analysis of Covariance (ANCOVA) was used as a statistical technique to determine the significant difference, if any, existing between pretest and posttest data on selected dependent variables separately and presented in Table-I.

Table 1

Variables	Test	Combination of Yogic Practices and Aerobic Exercises	Control Group	Source of Variance	SS	df	Mean Square	'F' Ratio	
Cardio respiratory endurance	Pre test	Mean	2475	2458	Between	0.03745	1	0.03745	0.520
		S.D	151.20	104.5	Within	2.017	28	0.07202	
	Post test	Mean	2572	2515	Between	1.391	1	1.391	13.807
		S.D	92.64	61.84	Within	2.821	28	0.101	
	Adjusted Post test	Mean	2576	2492	Between	87631.4	1	87631.4	53.94*
					Within	43862.1	27	1624.5	
Vital capacity	Pre test	Mean	2605	2565	Between	48.133	1	48.133	2.57
		S.D	40.31	60.35	Within	391.33	28	13.482	
	Post test	Mean	2873	2576.66	Between	1244111	1	1244111	109.09
		S.D	91.83	52.15	Within	239500	28	5702.38	
	Adjusted Post test	Mean	2857.53	2585.59	Between	1177943	1	1177943	124.57
					Within	193420	27	4717.57	

(The table value required for significant at .05 level with df 1 and 28; and 1 and 27 are 4.20 and 4.215 respectively).

The pretest mean of combination of selected yogic practices and aerobic exercises group and control group on Cardio respiratory endurance (2475 ± 151.2 Vs 2458 ± 104.5) resulted in a 'F' ratio of 0.52. The posttest mean of combination of selected yogic practices and aerobic exercises group and control group (2572 ± 92.64 Vs 2515 ± 61.84) resulted in a 'F' ratio of 13.807. The adjusted posttest mean of combination of selected yogic practices and aerobic exercises group and control group (2576 Vs 2492) resulted in a 'F' ratio of 53.94*. The results of the study indicate that there was a significant difference between combination of selected yogic practices and aerobic exercises group and control group on cardio respiratory endurance.

The pretest mean of combination of selected yogic practices and aerobic exercises group and control group on vital capacity (2605 ± 40.31 Vs 2565 ± 60.35) resulted in a 'F' ratio of 2.57. The posttest mean of combination of selected yogic practices and aerobic exercises group and control group on vital capacity (2873 ± 91.83 Vs 2576.66 ± 52.15) resulted in a 'F' ratio of 109.09. The adjusted posttest mean of combination of selected yogic practices and aerobic exercises group and control group on vital capacity (2857.53 Vs 2585.59) resulted in a 'F' ratio of 124.57*. The results of the study indicate that there was a significant difference between combination of selected yogic practices and aerobic exercises group and control group on vital capacity.

Discussion

The result of the study indicates that the combination of selected yogic practices and aerobic exercises group had significantly improved the selected dependent variables namely cardio respiratory endurance and vital capacity. However, control group did not show any improvement on the selected variables as it was not involved in any of the specific training means. The result of the study in consonance with the findings of the has produced significant improvement on cardio respiratory endurance and vital capacity. It is inferred from the results of the present study that all the dependent variables were significantly improved due to the influence of combination of selected yogic practices and aerobic exercises.

Conclusion

- It is concluded that the combination of selected yogic practices and aerobic exercises program has resulted in significant improvement on selected criterion variables such as cardio respiratory endurance and vital capacity as compared to control group.
- It is concluded that there was significant differences on cardio respiratory endurance and vital capacity among experimental group and control group after eight weeks of combination of selected yogic practices and aerobic exercises.

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