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Influence of brisk walking and yogic practices on selected physiological variables among diabetic patients

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Abstract

The purpose of the study was to analyse the influence of brisk walking and yogic practices on selected physiological variables among diabetic patients. To achieve this purpose thirty men, type II diabetic patients from Government Medical College and Hospital, Nizamabad, Telangana, aged 30 – 50 years volunteered to participate in this study. Subjects were assigned into three groups namely brisk walking exercises group (N-10), yogic practices group and control group. Physiological variables such as resting pulse rate and vital capacity were selected as criterion variables. Analysis of covariance (ANCOVA) was used as statistical technique. Schaffer's test was followed as a post hoc test. The results of the study showed that there was a significance differences exist between the groups on resting pulse rate and vital capacity when compared to the control group.

Keywords: Brisk walking, yogic practices, resting pulse rate and vital capacity

Introduction

Brisk walking is generally distinguished from running in that only one foot at a time leaves contact with the ground: for humans and other bipeds running begins when both feet are off the ground with each step. Diabetes mellitus often referred to simply as diabetes is a syndrome of disorder metabolism, usually due to a combination of hereditary and environmental causes, resulting in abnormally high blood sugar levels. All forms of diabetes have been treatable since insulin became medically available in 1921, but there is no cure. A physiological value of exercises depends upon its capacity to confer health upon the person practicing it. Practice of yoga has been reported to be beneficial in treating arrange of stress related disorders, improving autonomic functions, relieving symptoms of asthma, stuttering and reducing signs of oxidative stress. Practice of yogic develops a steady mind, strong will-power and sound judgment. In addition, regular yogic helps extend life and enhance perception.

Methodology

The purpose of the study was to analyse the influence of brisk walking and yogic practices on selected physiological variables among diabetic patients. To achieve this purpose thirty men, type II diabetic patients from Government Medical College and Hospital, Nizamabad, Telangana, aged 30 – 50 years volunteered to participate in this study. Subjects were assigned into three groups namely brisk walking exercises group (N-10), yogic practices group and control group. Physiological variables such as resting pulse rate and vital capacity were selected as criterion variables. They were assessed by using Palpation method and Spiro Meter. Analysis of covariance (ANCOVA) was used as statistical technique. Scheffe's test was followed as a post hoc test. The results of the study showed that there was a significance differences exist between the group on resting pulse rate and vital capacity when compared to the control group.

Training Schedule

Experimental Group I (Brisk walking exercises) Duration: 45 minutes (6.00 to 6.45 am), Six weeks (6days per week). Experimental Group II (Yogic Practices) Duration: 45 minutes (6.00

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to 6.45 am), Six weeks (6 days per week), Yogic practices such as Kriyas, various types of Asanas, Pranayama and

Meditation. Control group did not participate any specific training.

Results and Discussions

Table 1: Results on Calculation of Analysis of Covariance on Physiological Variables Calculation of Analysis of Covariance on Resting Pulse Rate

	Brisk Walking Group	Yogic Practices Group	Control Group	Source of Variance	Sum of Squares	Df	Mean Squares	Obtained F-ratio
Pre-Test Mean	69.22	69.75	70.25	Between	11.0	2	5.50	1.63
				Within	193.7	27	3.38	
Post Test Mean	66.61	64.81	70.35	Between	320.7	2	160.35	34.57*
				Within	264.5	27	4.46	
Adjusted Post Test Mean	66.69	64.80	70.72	Between	302.3	2	151.15	32.59*
				Within	259.6	26	4.46	

Calculation of Analysis of Covariance on Vital Capacity

	Brisk Walking Group	Yogic Practices Group	Control Group	Source of Variance	Sum of Squares	Df	Mean Squares	Obtained F-ratio
Pre-Test mean	3440.00	3450.00	3450.00	Between	3000.00	2	1500.00	0.01
				Within	6357000.00	27	198976.19	
Post Test Mean	3496.67	3603.33	3486.67	Between	125444.44	2	62722.22	30.32
				Within	8567000.00	27	203976.19	
Adjusted Post Test Mean	3505.74	3603.33	3476.59	Between	131511.64	2	65755.82	33.49*
				Within	80502.18	26	1963.47	

Table 2: Schaffer's Post Hoc Analysis Results Post Hoc Analysis for Resting Pulse Rate

Brisk Walking Group	Yogic Practices Group	Control Group	Mean Difference	Reqd. C. I
66.69	64.80		1.89*	1.73
67.48		70.27	3.58*	1.73
	64.80	70.27	5.47*	1.73

Post Hoc Analysis for Vital Capacity

3506.74	3603.33		96.59*	41.88
3506.74		3476.59	30.15	41.88
	3603.33	3476.559	126.74*	41.88

Finding of the study shows that there was a significant improvement in diabetic patients. It may be due to influence of differences existed between brisk walking group, yogic practices group and control groups on resting pulse rate and vital capacity. The significant changes in resting pulse rate and vital capacity observed in the present study suggests that brisk walking and yogic practices might have immediate effect on selected criterion variables.

Conclusion

It was concluded that the brisk walking and yogic practices programs has resulted in significant improvement on selected criterion variables as compared to control group.

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