Journal of Advanced Zoology
ISSN: 0253-7214
Volume 45 Issue 1 Year 2024 Page 707 - 713

The Effect Of Two Different Packages Of Training On Leg Explosive Power In Diabetic Patients

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Abstract

The main objective of this study was to find out The effect of two different packages of training on Leg Explosive power in Diabetic Patients. To achieve the purpose of this study, forty five type- 2 diabatic patients subjects were randomly selected from Indra Gandhi Memorial Hospital, and yoga and fitness club Agartala. Their age ranges between 40 years to 60 years. They were randomly divided into three equal groups. The groups were assigned as Experimental Group I, Experimental Group II and Control Group equivalently. Experimental Group I was exposed to Cyclic Meditation (CM), Experimental Group II was exposed to Yogic asanas (YA) and Control Group (CG) was not exposed to any experimental training other than their regular daily activities. . The analysis of covariance was used to analyze the significant differences, if any among the groups. Three groups were compared, and whenever they obtained 'F' ratio for adjusted post-test was found to be significant, the Scheffe's test to find out the paired mean differences, if any. The 0.05 level was fixed as the level of significance to test the 'F' ratio obtained by the analysis of covariance, which was considered as appropriate. The result of the study indicates due to training on flexibility,vo2 max and self-confidence have been improved significantly.

Keywords: Meditation, Yoga & Anacova

INTRODUCTION:

Yoga is a way of life, an experiential science of human nature that enables us to realize our real selves. Take up the study of yoga science as you would any other science of material nature and remember that there is neither mystery nor danger in it (Vivekananda, 1896). Yoga is the original, timeless knowledge about the "essence". Yoga could be rightly termed the science of infinite human possibilities as it enables us to manifest in totality our inherent potentiality. Yoga simultaneously deals with all aspects of the philosophy, psychology and practicality of conscious evolution. Yoga doesn't provide only concepts but also the tools and technology needed to find and realize the "essence". Yoga enables us to search the depths of the being theoretically, but first, experientially.

Psychophysical factors affecting chronic obstructive pulmonary disease effective management of COPD requires addressing both physical and psychological aspects of the disease. Pulmonary rehabilitation programs, which include exercise training, education, and breathing techniques, can improve physical function and reduce anxiety. Psychological intervention, such as cognitive behavioral therapy (CBT),

mindfulness, and relaxation techniques, can help manage anxiety, improve coping skills, and enhance quality of life for COPD patients McCarthy, P. H. J., & Ainsworth, R. (2018).

METHODOLOGY:

SELECTION OF SUBJECTS:

To achieve the purpose of this study, forty five type- 2 diabatic patients subjects were randomly selected from Indra Gandhi Memorial Hospital, and yoga and fitness club Agartala. Their age ranges between 40 years to 60 years. They were randomly divided into three equal groups. The groups were assigned as Experimental Group I, Experimental Group II and Control Group equivalently. Experimental Group I was exposed to Cyclic Meditation (CM), Experimental Group II was exposed to Yogic asanas (YA) and Control Group (CG) was not exposed to any experimental training other than their regular daily activities .Practices for a time of 12 weeks. After 12 weeks of participation in the respective treatments, the posttest was administered to the aforementioned dependent variables. From Monday through Saturday, the practice training program ran from 6:00 a.m. to 7:00 a.m. and from 7:00 a.m. to 8:00 a.m.

CRITERION MEASURES

S.no	Variables	Tools administered	Unit of measurement
Psychophysical variables			
	Leg explosive power	Standing broad jump	Meter

EXPERIMENTAL DESIGN:

This experimental study was administered to only two experimental groups and one control group of 15 subjects each. For this purpose Group I underwent , cyclic meditation Group II underwent yoga and Group III acted as control group.

TRAINING PROGRAM

During the program of yogic practices the experimental group I underwent cyclic meditation program for six days a week from Monday to Saturday 6:00 am to 7:00 am and experimental group II underwent Yoga practices program for six days a week from Monday to Saturday 7:00 am to 8:00 am. Experimental treatment was restricted to 12 weeks only.

Table II and III show the yogic training schedules.

TABLE – I 3.10 12-Week Training Schedule of Cyclic Meditation

Week	Meditation Phase	Duration	Rest	Sets	Repetitions
1 and 2	**Instant Relaxation Technique (IRT)**	5 min	1 min	1	1
	Slow Stretching + Quick Relaxation Technique (QRT)	10 min	2 min	1	1
	QRT + Deep Breathing (Pranayama)	8 min	2 min	1	1
	IRT + QRT	10 min	1 min	1	1
	Repeat Day 1 Routine	5 min	1 min	1	1
	Repeat Day 2 Routine	10 min	1 min	1	1

Week	Meditation Phase	Duration	Rest	Sets	Repetitions
3 and 4	**IRT + QRT + Breathing Awareness**	10 min	1 min	1	1
	Standing Stretches + QRT + IRT	12 min	2 min	1	1
	IRT + Breathing Exercise (Pranayama)	10 min	1 min	1	1
	QRT + IRT + Focus on Body Awareness	12 min	1 min	1	1
	Repeat Day 1 Routine	10 min	1 min	1	1
	Repeat Day 2 Routine	12 min	1 min	1	1

Week	Meditation Phase	Duration	Rest	Sets	Repetitions
5 and 6	**IRT + QRT + Breathing (Pranayama)**	15 min	2 min	1	1
	Standing Stretches + IRT + Quick Relaxation	15 min	2 min	1	1
	IRT + Breathing Awareness	15 min	2 min	1	2
	QRT + IRT + Guided Meditation	15 min	2 min	1	1
	Repeat Day 1 Routine	15 min	2 min	1	1
	Repeat Day 2 Routine	15 min	2 min	1	1

Week	Meditation Phase	Duration	Rest	Sets	Repetitions
7 and 8	**IRT + QRT + Pranayama**	18 min	2 min	1	1
	Standing Stretches + IRT + QRT	18 min	2 min	1	2

	IRT + Pranayama + Guided Body Awareness	18 min	2 min	1	2
	QRT + IRT + Guided Relaxation	18 min	2 min	1	1
	Repeat Day 1 Routine	18 min	2 min	1	1
	Repeat Day 2 Routine	18 min	2 min	1	1

Week	**Meditation Phase**	**Duration**	**Rest**	**Sets**	**Repetitions**
9 to 10	**IRT + QRT + Pranayama**	20 min	2 min	1	2
	Standing Stretches + QRT + Pranayama	20 min	2 min	1	2
	IRT + QRT + Body Awareness	20 min	2 min	1	2
	Guided Relaxation + Deep Breathing	20 min	2 min	1	1
	Repeat Day 1 Routine	20 min	2 min	1	2
	Repeat Day 2 Routine	20 min	2 min	1	2

Week	**Meditation Phase**	**Duration**	**Rest**	**Sets**	**Repetitions**
11 to 12	**IRT + QRT + Guided Body Awareness**	25 min	2 min	1	2
	Standing Stretches + QRT + Breathing	25 min	2 min	1	2
	IRT + QRT + Guided Visualization	25 min	2 min	1	2
	Full-Body Relaxation + Pranayama	25 min	2 min	1	1
	Repeat Day 1 Routine	25 min			

TRAINING SCHEDULE FOR PACKAGE II

Weeks	Surya Namaskar	Bhujangasana	Paschimottanasana	Ardha Matsyendrasana	Sarvangasana	Halasana	Shavasana	Matsyasana	Kapalbhati	Vyutkarma	Sheetkari Karma
1 2	2 sets, 5 reps, low intensity	2 sets, hold 10 sec each	2 sets, hold 10 sec each	2 sets, hold 10 sec each	2 sets, hold 10 sec each	1 set, 5 min	1 set, hold 10 sec	2 sets, 10 breaths	1 set, 1 min	1 set, 1 min	
3 4	2 sets, 8 reps, low-medium intensity	2 sets, hold 15 sec each	2 sets, hold 15 sec each	2 sets, hold 15 sec each	2 sets, hold 15 sec each	1 set, 6 min	1 set, hold 15 sec	2 sets, 15 breaths	1 set, 2 min	1 set, 2 min	
5 6	3 sets, 10 reps, medium intensity	3 sets, hold 20 sec each	3 sets, hold 20 sec each	3 sets, hold 20 sec each	3 sets, hold 20 sec each	1 set, 8 min	1 set, hold 20 sec	3 sets, 20 breaths	1 set, 2 min	1 set, 2 min	
7 8	3 sets, 12 reps, medium-high intensity	3 sets, hold 25 sec each	3 sets, hold 25 sec each	3 sets, hold 25 sec each	3 sets, hold 25 sec each	1 set, 10 min	2 sets, hold 20 sec	3 sets, 25 breaths	2 sets, 2 min	2 sets, 2 min	
9 10	4 sets, 14 reps, high intensity	4 sets, hold 30 sec each	4 sets, hold 30 sec each	4 sets, hold 30 sec each	4 sets, hold 30 sec each	1 set, 12 min	2 sets, hold 25 sec	4 sets, 30 breaths	2 sets, 3 min	2 sets, 3 min	
11 12	4 sets, 15 reps, high	4 sets, hold	4 sets, hold 30-45 sec each	4 sets, hold 30-45 sec each	4 sets, hold 30-45 sec each	4 sets, hold 30-45 sec each	1 set, 15 min	2 sets, hold 30 sec	4 sets, 35 breaths	2 sets, 3 min	2 sets, 3 min

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STATISTICAL TECHNIQUE

Analysis of covariance (ANCOVA) statistical technique was used to test the significant difference among the three groups. If the adjusted post-test results were significant, Scheffe's post hoc test was used to determine the paired mean significant difference.

Table – I a Analysis of Covariance on Leg Explosive Power of Experimental and Control groups

	CM	**YG**	**CG**	**SOV**	**SOS**	**df**	**M.S**	**f-ratio**
Adjusted Post-test Mean	224.48	226.36	221.68	**BG**	104.79	2	52.39	36.18*
				WG	59.37	41	1.44	

***Significant at 0.05 level of confidence.*

(The table value required for significance with df 2 and 41 is 3.23)

The adjusted post-test mean values on leg explosive power of cyclic meditation, yoga group and control group are 224.48, 226.36 and 221.68 respectively. The obtained 'F' ratio of 36.18 for adjusted post-test score was greater than the required table value of 3.23 for df 2 and 41 for significance at 0.05 level of confidence on leg explosive power. It proved that, the differences exist among the adjusted post-test means of cyclic meditation, yoga group , and control group on leg explosive power.

The 'F' value in the adjusted post-test means was found significant, hence Scheffe's test was applied to assess the paired mean of leg explosive power difference and the results are presented in Table I (b).

Table – I (b) Scheffe's Post hoc Test for the differences among Adjusted Post-test Paired Means of Experimental and Control groups on Leg Explosive Power

HYG	**AYG**	**CG**	**M.D**	**C.I**
224.48	226.36	-	1.88*	1.11
224.48	-	221.68	2.80*	
-	226.36	221.68	4.68*	

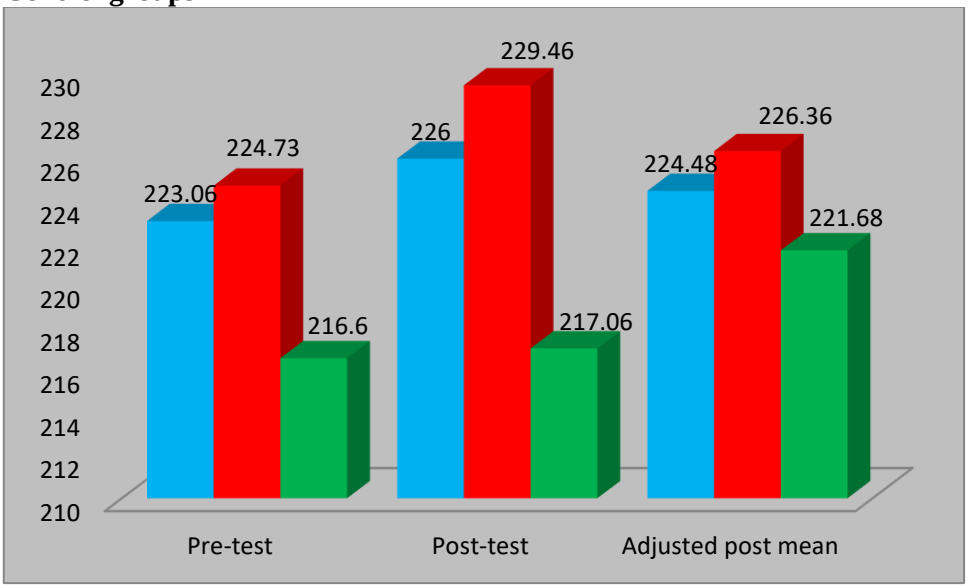
**Significant at 0.05 level*

As shown in table I (b), the Scheffe's test post hoc analysis proved that significance mean differences existed between; cyclic meditation, yoga group ; yoga group and control groups; cyclic meditation and control groups on leg explosive power. Since, the mean differences 1.88, 2.80 and 4.68 are higher than the confident interval value 1.11.

Hence, it is concluded that due to the effect of cyclic meditation, yoga group the leg explosive power was significantly improved in diabetic patients. It was also concluded that yoga group was better than cyclic meditation group in increasing leg explosive power diabetic patients.

The pre-test, post-test and adjusted post-test mean values of experimental and control groups on leg explosive power is graphically represented in the figure I(b).

Figure – I(b) Bar Diagram Showing the Mean Values on Leg Explosive Power of Experimental and Control groups



Conclusions

Based on the results obtained and by analyzing the data collected on the dependent variables for the study, the following conclusions were drawn

1. Cyclic meditation and yoga practice had shown better improvement in leg explosive power when compare to control group..
2. Yogic practices had shown better improvement in leg explosive power through the practices of cyclic meditation practice.

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