



## **EFFECT OF YOGIC TRAINING AND AEROBICS ON SELECTED BIO- CHEMICAL VARIABLES AMONG WOMEN DIABETIC PATIENTS IN CHIDAMBARAM**

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### **ABSTRACT**

The purpose of the study was to find out the effect of yogic training and aerobics on selected Bio-chemical variables among female Diabetic Patients in chidambaram Random group design was followed in this study. Randomly selected (N=30) diabetic patients who were undergoing treatment in Government Hospital, chidambaram were selected as subjects for this study with their consent. The subjects were divided into three groups, experimental group I, experimental group II and control group. Experimental group I underwent yogic practices, experimental group II underwent aerobics and control group was not given any special treatment. Pre tests were conducted for all the subjects on selected Biochemical variable such as low density lipoprotein. The experimental groups participated in their respective exercises, namely aerobics for twelve weeks and yogic exercises for twelve weeks. The post tests were conducted on the above said dependent variables after a period twelve weeks. The difference between the initial and final scores was considered the effect of respective experimental treatments. To test the statistical significance ANCOVA was used. In all cases 0.05 level was fixed to test the hypothesis.

### **INTRODUCTION**

Yoga means the experience of oneness or unity with inner being. This unity comes after dissolving the duality of mind and matter into supreme reality. It is a science by which the individual approaches truth. The aim of all yoga practice is to achieve truth where the individual soul identifies itself with the supreme soul or God. Yoga has the surest remedies for man's physical as well as psychological ailments. It makes the organs of the body active in their functioning and has good effect on internal functioning of the human body. Yoga is a re-education of one's mental process, along with the physical. The stages of yoga are eight, Yama, Niyama, Pranayama, Pratyahara, Dharana, Dhyana and Samathi, they are all integrated.

(Iyengar, B.K.S., 1999) Yoga is aimed at five universal commandments to create a better world; the five principles are non violence or ahimsa, freedom from greed, satya or truthfulness, charity, freedom from desire. Five principles of Niyama are cleanliness; contentment; austerity, study of one's own self, which includes the body mind, intellect and ego and the final principle is devotion to God. Practice of postures (Asana) and conscientious practice of the various types of posture. Practice of breath control (Pranayama) is practicing breathing techniques with care and determination. Detachment from worldly activities (Pratyahara) is developing a non – attached attitude of body and mind. Concentration (Dharana) is being able to hold on to a subject mentally.

Meditation (Dhyana) is a developing a quiet, meditative stage. Trance (or) state of bliss (Samathi) is reaching a state absorption in a subject (or) in the Divine. (Iyengar, B.K.S., 1999)

## METHODOLOGY

### EXPERIMENTAL DESIGN

Random group design was followed in this study. Randomly selected (N=30) diabetic patients who were undergoing treatment in Government Hospital, Chidambaram were selected as subjects for this study with their consent. The subjects were divided into three groups, experimental group I, experimental group II and control group. Experimental group I underwent yogic practices, experimental group II underwent aerobics and control group was not given any special treatment. Pre tests were conducted for all the subjects on selected Biochemical variable such as low density lipoprotein. The experimental groups participated in their respective exercises, namely aerobics for twelve weeks and yogic exercises for twelve weeks. The post tests were conducted on the above said dependent variables after a period twelve weeks. The difference between the initial and final scores was considered the effect of respective experimental treatments. To test the statistical significance ANCOVA was used. In all cases 0.05 level was fixed to test the hypothesis.

### Computation of analysis of covariance of low density lipoprotein

	YOGIC PRACTICES GROUP	AEROBIC S GROUP	CONTROL GROUP	SOURCE OF VARIANCE	SUM OF SQUARES	df	Mean SQUARES	OBTAINED
Pre test mean	1060.21	102.15	100.28	Between	82.97	2	41.48	0.42
				within	2676.15	27	99.12	
Post test mean	102	99.01	99	Between	51.04	2	25.52	0.33
				within	2088.44	27	77.35	
Adjusted post test mean	98.21	97.73	101.45	Between	88.46	2	44.23	6.76*
				within	170.17	26	6.55	
Mean diff	-6.38	-654	-1.58					

Table F-ratio at 0.05 level of confidence for 2 and 27 (df) =3.35, 2 and 26 (df) =3.37.

\*Significant

As shown in Table I, the obtained pre test means on Low Density Lipoprotein on Yogic practices group was 106.83, Aerobics group was 104.17 was and control group was 102.83. The

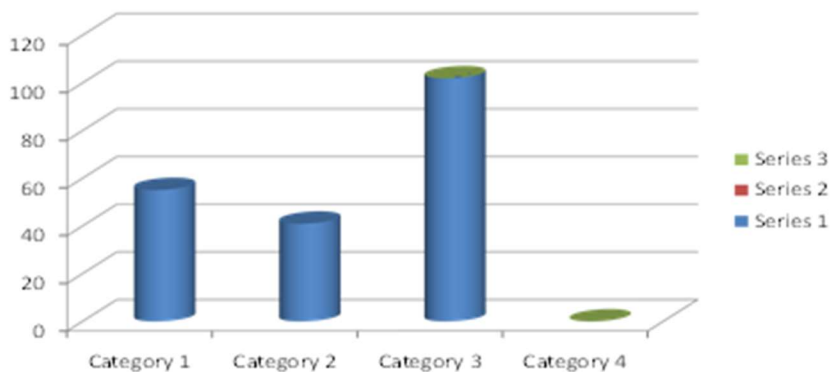
obtained pre test F value was 0.42 and the required table F value was 3.35, which proved that there was no significant difference among initial scores of the subjects. The obtained post test means on Low Density Lipoprotein on Yogic practices group was 101.00, Aerobics group was 98.23 and control group was 101.00. The obtained post test F value was 0.33 and the required table F value was 3.35, which proved that there was no significant difference among post test scores of the subjects. Taking into consideration of the pre test means and post test means adjusted post test means were determined and analysis of covariance was done and the obtained F value 6.76 was greater than the required value of 3.37 and hence it was accepted that there was significant differences among the treated groups. Since significant differences were recorded, the results were subjected to post hoc analysis using Scheffe's Confidence Interval test. The results were presented in Table II.

Table II: Scheffe's Confidence Interval Test Scores on Low Density Lipoprotein

MEANS					Required CI
Yogic group	practices	Aerobics group	Control group	Mean Differences	
99.12		98.61		0.51	2.96
99.12			102.51	3.39*	2.96
		98.61	102.51	3.90*	2.96

\* Significant

The post hoc analysis of obtained ordered adjusted means proved that there was significant differences existed between Yogic practices group and control group (MD: 3.39). There was significant difference between Aerobics group and control group (MD: 3.90). There was no significant difference between treatment groups, namely, Yogic practices group and Aerobics group. (MD: 0.51). The ordered adjusted means were presented through bar diagram for better understanding of the results of this study in Figure I.



## CONCLUSION

It was found that twelve weeks yogic practices and aerobics significantly altered biochemical variable, low density lipoprotein among diabetic patients and the comparisons between treatment groups proved that there was no significant difference between the experimental groups

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