



Influence of Vethathiri Maharishi's Yoga Techniques on Selected Hematological Variables among Diabetic Patients

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Abstract

The purpose of the study was to find out the influence of vethathiri maharishi's yoga techniques on selected psychological variables among diabetic patients. To achieve the purpose of the present study, forty five diabetic patients those who are working in Vidyaa Vikas Educational Institutions, Tiruchengodu, Tamilnadu, India were selected as subjects at random and their ages ranged from 35 to 45 years. The subjects were divided into three equal groups of fifteen subjects each. Group I acted as Experimental Group I (Kayakalpa Yoga with Meditation), Group II acted as Experimental Group II (Simplified Kundalini Yoga with Meditation) and Group III acted as Control Group. Hematological variables such as RBC, fasting plasma glucose and post prandial plasma glucose were assessed in lab. The duration of experimental period was 12 weeks. The three groups were statistically analysed by using analysis of co-variance (ANCOVA). In case of significance of mean difference was observed on the criterion measure, as a post – hoc test, the Scheffe's test was applied to find out which pair of group is high among the others. The result of the study reveals that there was a significant improvement in the experimental groups on selected hematological variables when compared to the control group after the completion of twelve weeks of kayakalpa yoga with meditation and simplified kundalini yoga with meditation.

Keywords: Kayakalpa, Simplified Kundalini Yoga, Diabetes.

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Introduction

According to Vethathiri Maharishi (2002), man is a unique figure in the manifestation of the Universe. Maharishi is supreme among all the living beings on earth because of gifted with the sixth sense that is potential of self realization. Due sensual intoxication, man forgets his true nature. Maharishi succumbs to emotions such as greed, anger, miserliness, immoral sexual passion, inferiority or Superiority complex and Vengeance. When Maharishi thinks, speaks and acts in this condition, he creates troubles, pains and miseries to himself and others. All such pain producing is called sins. All his deeds, enjoyment and experience are imprinted in him and they condition his character and qualities. Manavalakalai yoga provides all benefits in both spiritual and material aspects of man. Therefore this yoga is a well balanced and perfect process for success and peace in life.

Vethathiri Maharishi developed a complete system of practices for the self. (a) Simplified physical exercises that are designed to balance the circulations of blood, heat, air, and life energy and to keep the body fit without any stress or strain. People of all ages can practice and benefit from them, (b) Simplified Kundilini

Yoga (SKY) meditation, which is a unique technique to calm your mind by connecting it with your life energy. It is simple, systematic, and safe, which enables a person to go within and progress spiritually. Blessings are given at the end of the meditation as autosuggestions to help an individual to harmonize relationships and interactions with others. (c) Introspection practices are taught for personality development and to deal with day-to-day life situations, such as analyzing thoughts, streamlining desires, neutralizing anger, eradicating worries, and realizing Self, (d) Kaya Kalpa literally means body immortal. It offers a simple and powerful practice to maintain health and youthfulness, and to withstand the aging process.

Diabetes is one of the major health problems affecting about 5% of Indian population. Complications involved in management of diabetes and increasing prevalence of diabetes every year have been emphasized on the need for efficient control. Diet control, exercises and meditation with insulin or antiglycettmic drug are the presently available treatment procedures. Stress management is also important in preventing the onset as well as controlling diabetes. Yoga includes moderate exercise, diet restriction, relaxation techniques etceteras, is a very good stress management system. Yoga brings harmony in body and mind, and keeps the person health, both physically and mentally. Literature survey indicates that effective control of diabetes; both Insulin Dependent

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Diabetes Mellitus and Non Insulin Dependent Diabetes Mellitus can be achieved by yoga practice, which can be explored by further experimental researches. The science of yoga is an ancient one. It is a rich heritage of our culture. Several older books make a mention of the usefulness of yoga in the treatment of certain diseases and preservation of health in normal individuals. The effect of yogic practices on the management of diabetes has not been investigated well. It was carried out well designed studies in normal individuals and those with diabetes to assess the role of yogic practices on glycaemic control, insulin kinetics, body composition exercise tolerance and various co-morbidities like hypertension and dyslipidemia.

Methodology

The purpose of the study was to find out the influence of vethathri maharishi's yoga techniques on selected psychological variables among diabetic patients. To achieve the purpose of the present study, forty five diabetic patients those who are working in Vidyaa Vikas

Educational Institutions, Tiruchengodu, Tamilnadu, India were selected as subjects at random and their ages ranged from 35 to 45 years. The subjects were divided into three equal groups of fifteen subjects each. Group I acted as Experimental Group I (Kayakalpa Yoga with Meditation), Group II acted as Experimental Group II (Simplified Kundalini Yoga with Meditation) and Group III acted as Control Group. Hematological variables such as RBC, fasting plasma glucose and post prandial plasma glucose were assessed in lab. The duration of experimental period was 12 weeks. The three groups were statistically analysed by using analysis of covariance (ANCOVA). In case of significance of mean difference was observed on the criterion measure, as a post – hoc test, the Scheffe's test was applied to find out which pair of group is high among the others.

Results and Discussion

The detailed procedure of analysis of data and interpretation were given below,

Table I. Computation of analysis of covariance of mean of kayakalpa yoga with meditation, sky yoga with meditation and control groups on RBC

	KYWGMG	SKYWGMG	CG	Source of Variance	Sum of Squares	df	Means Squares	F-ratio
Pre-Test Means	4.39	4.42	4.31	BG	0.08	2	0.04	1.92
				WG	0.90	42	0.02	
Post-Test Means	5.06	5.10	4.35	BG	5.35	2	2.67	225.85*
				WG	0.49	42	0.01	
Adjusted Post-Test Means	5.06	5.10	4.35	BG	4.97	2	2.48	205.79*
				WG	0.49	41	0.01	

* Significant at 0.05 level

An examination of table - I indicated that the pre test means of kayakalpa yoga with meditation, sky yoga with meditation and control groups were 4.39, 4.42 and 4.31 respectively. The obtained F-ratio for the pre-test was 1.92 and the table F-ratio was 3.22. Hence the pre-test mean F-ratio was insignificant at 0.05 level of confidence for the degree of freedom 2 and 42. This proved that there were no significant difference between the experimental and control groups indicating that the process of randomization of the groups was perfect while assigning the subjects to groups. The post-test means of the kayakalpa yoga with meditation, sky yoga with meditation and control groups were 5.06, 5.10 and 4.35 respectively. The obtained F-ratio for the post-test was 225.85 and the table F-ratio was 3.22. Hence post-test mean F-ratio was significant at 0.05 level of confidence

for the degree of freedom 2 and 42. This proved that the differences between the post test means of the subjects were significant. The adjusted post-test means of the kayakalpa yoga with meditation, sky yoga with meditation and control groups were 5.06, 5.10 and 4.35 respectively. The obtained F-ratio for the adjusted post-test means was 205.79 and the table F-ratio was 3.23. Hence the adjusted post-test mean F-ratio was significant at 0.05 level of confidence for the degree of freedom 2 and 41. This proved that there was a significant difference among the means due to the experimental trainings on RBC. Since significant differences were recorded, the results were subjected to post hoc analysis using Scheffe's post hoc test. The results were presented in Table-II.

Table II. The scheffe’s test for the differences between the adjusted post test paired means on RBC

Adjusted Post-test means			Mean Difference	Required CI
KYWVG	SKYWVG	CG		
5.06	5.10	---	0.04	0.09
5.06	---	4.35	0.71*	
---	5.10	4.35	0.75*	

* Significant at 0.05 level

The multiple comparisons showed in Table II proved that there existed significant differences between the adjusted means of kayakalpa yoga with meditation and control group (0.71), sky yoga with meditation and control group (0.75). There was no significant difference between kayakalpa yoga with meditation and sky yoga

with meditation (0.04) at 0.05 level of confidence with the confidence interval value of 0.09. The pre, post and adjusted means on RBC were presented through bar diagram for better understanding of the results of this study in Figure-I.

Figure I. Pre post and adjusted post test differences of the, kayakalpa yoga with meditation, sky yoga with meditation and control groups on RBC

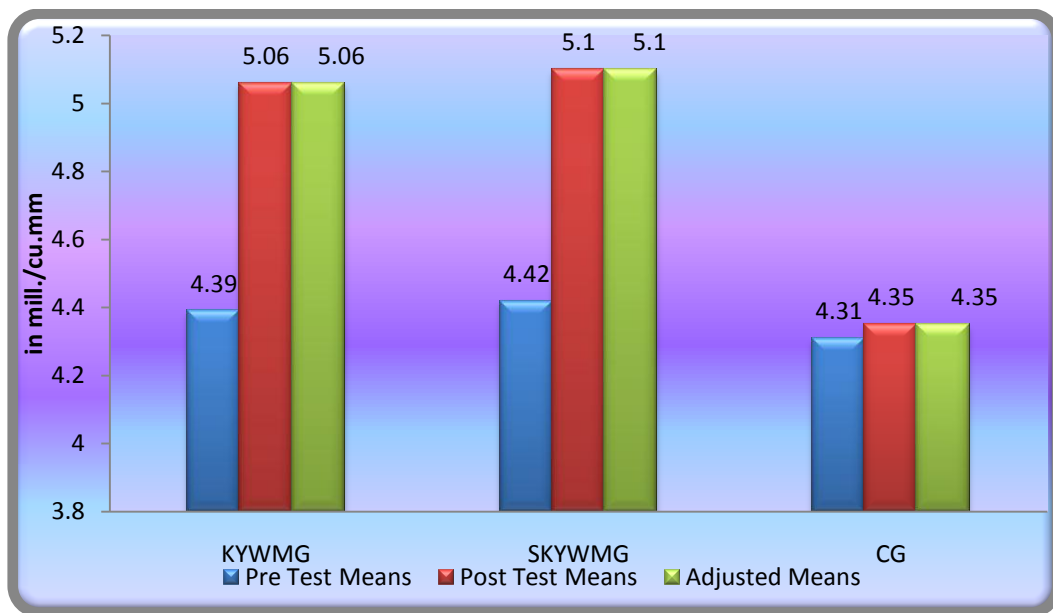


Table III. Computation of analysis of covariance of mean of kayakalpa yoga with meditation, sky yoga with meditation and control groups on fasting plasma glucose

	KYWVG	SKYWVG	CG	Source of Variance	Sum of Squares	df	Means Squares	F-ratio
Pre-Test Means	243.86	240.33	246.20	BG	261.73	2	130.86	1.18
				WG	4629.467	42	110.22	
Post-Test Means	189.00	195.13	245.46	BG	28797.73	2	14398.86	84.11*
				WG	7189.46	42	171.17	
Adjusted Post-Test Means	189.05	194.74	245.80	BG	28441.61	2	14220.80	81.92*
				WG	7117.03	41	173.58	

* Significant at 0.05 level

An examination of table - III indicated that the pre test means of kayakalpa yoga with meditation, sky yoga with meditation and control groups were 243.86,

240.33 and 246.20 respectively. The obtained F-ratio for the pre-test was 1.18 and the table F-ratio was 3.22. Hence the pre-test mean F-ratio was insignificant at 0.05

level of confidence for the degree of freedom 2 and 42. This proved that there were no significant difference between the experimental and control groups indicating that the process of randomization of the groups was perfect while assigning the subjects to groups. The post-test means of the kayakalpa yoga with meditation, sky yoga with meditation and control groups were 189.00, 195.13 and 245.46 respectively. The obtained F-ratio for the post-test was 84.11 and the table F-ratio was 3.22. Hence the post-test mean F-ratio was significant at 0.05 level of confidence for the degree of freedom 2 and 42. This proved that the differences between the post test means of the subjects were significant. The adjusted

post-test means of the kayakalpa yoga with meditation, sky yoga with meditation and control groups were 189.05, 194.74 and 245.80 respectively. The obtained F-ratio for the adjusted post-test means was 81.92 and the table F-ratio was 3.23. Hence the adjusted post-test mean F-ratio was significant at 0.05 level of confidence for the degree of freedom 2 and 41. This proved that there was a significant difference among the means due to the experimental trainings on fasting plasma glucose. Since significant differences were recorded, the results were subjected to post hoc analysis using Scheffe’s post hoc test. The results were presented in Table-IV.

Table IV. The scheffe’s test for the differences between the adjusted post test paired means on fasting plasma glucose

Adjusted Post-test means			Mean Difference	Required CI
KYWGMG	SKYWGMG	CG		
189.05	194.74	---	5.69	12.22
189.05	---	245.80	56.75*	
---	194.74	245.80	51.10*	

* Significant at 0.05 level

The multiple comparisons showed in Table IV proved that there existed significant differences between the adjusted means of kayakalpa yoga with meditation and control group (56.75), sky yoga with meditation and control group (51.10). There was no significant difference between kayakalpa yoga with meditation and

sky yoga with meditation (5.69) at 0.05 level of confidence with the confidence interval value 12.22. The pre, post and adjusted means on fasting plasma glucose were presented through bar diagram for better understanding of the results of this study in Figure-II.

Figure II. Pre post and adjusted post test differences of the, kayakalpa yoga with meditation, sky yoga with meditation and control groups on fasting plasma glucose

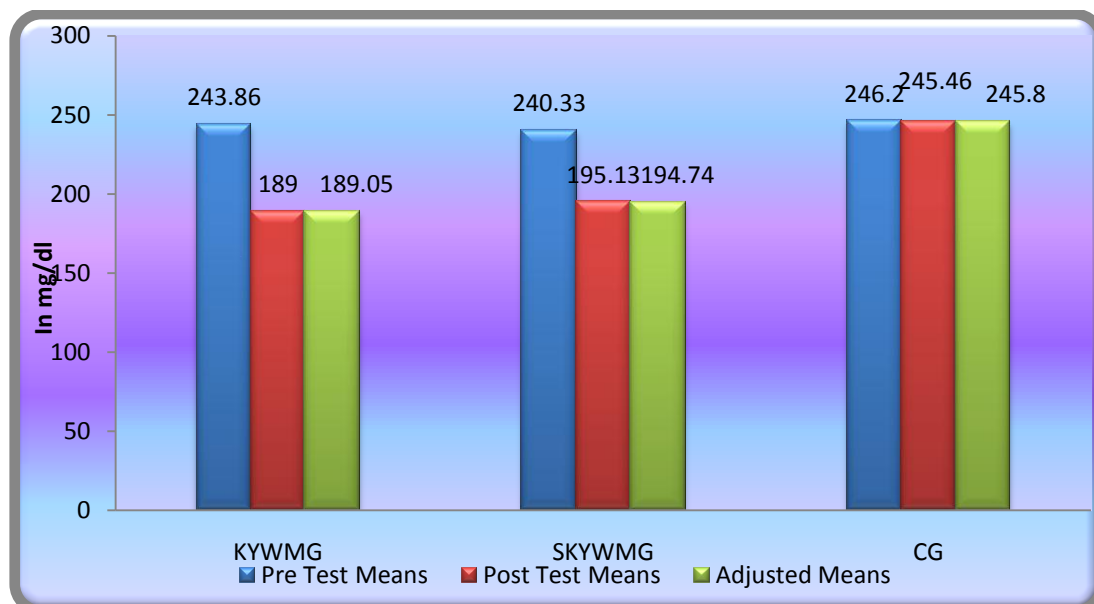


Table V. Computation of analysis of covariance of mean of kayakalpa yoga with meditation, sky yoga with meditation and control groups on post prandial plasma glucose

	KYWGMG	SKYWGMG	CG	Source of Variance	Sum of Squares	df	Means Squares	F-ratio
Pre-Test Means	307.93	306.66	301.46	BG	352.31	2	176.15	0.69
				WG	10584.00	42	252.00	
Post-Test Means	229.33	225.53	299.00	BG	51326.17	2	25663.08	104.77*
				WG	10287.06	42	244.93	
Adjusted Post-Test Means	229.46	225.60	298.79	BG	49346.91	2	24673.45	98.60*
				WG	10258.79	41	250.21	

* Significant at 0.05 level

An examination of table - V indicated that the pre test means of kayakalpa yoga with meditation, sky yoga with meditation and control groups were 307.93, 306.66 and 301.46 respectively. The obtained F-ratio for the pre-test was 0.69 and the table F-ratio was 3.22. Hence the pre-test mean F-ratio was insignificant at 0.05 level of confidence for the degree of freedom 2 and 42. This proved that there were no significant difference between the experimental and control groups indicating that the process of randomization of the groups was perfect while assigning the subjects to groups. The post-test means of the kayakalpa yoga with meditation, sky yoga with meditation and control groups were 229.33, 225.53 and 229.00 respectively. The obtained F-ratio for the post-test was 104.77 and the table F-ratio was 3.22. Hence the post-test mean F-ratio was significant at 0.05

level of confidence for the degree of freedom 2 and 42. This proved that the differences between the post test means of the subjects were significant. The adjusted post-test means of the kayakalpa yoga with meditation, sky yoga with meditation and control groups were 229.46, 225.60 and 298.79 respectively. The obtained F-ratio for the adjusted post-test means was 98.60 and the table F-ratio was 3.23. Hence the adjusted post-test mean F-ratio was significant at 0.05 level of confidence for the degree of freedom 2 and 41. This proved that there was a significant difference among the means due to the experimental trainings on post prandial plasma glucose. Since significant differences were recorded, the results were subjected to post hoc analysis using Scheffe’s post hoc test. The results were presented in Table-VI.

Table VI. The scheffe’s test for the differences between the adjusted post test paired means on post prandial plasma glucose

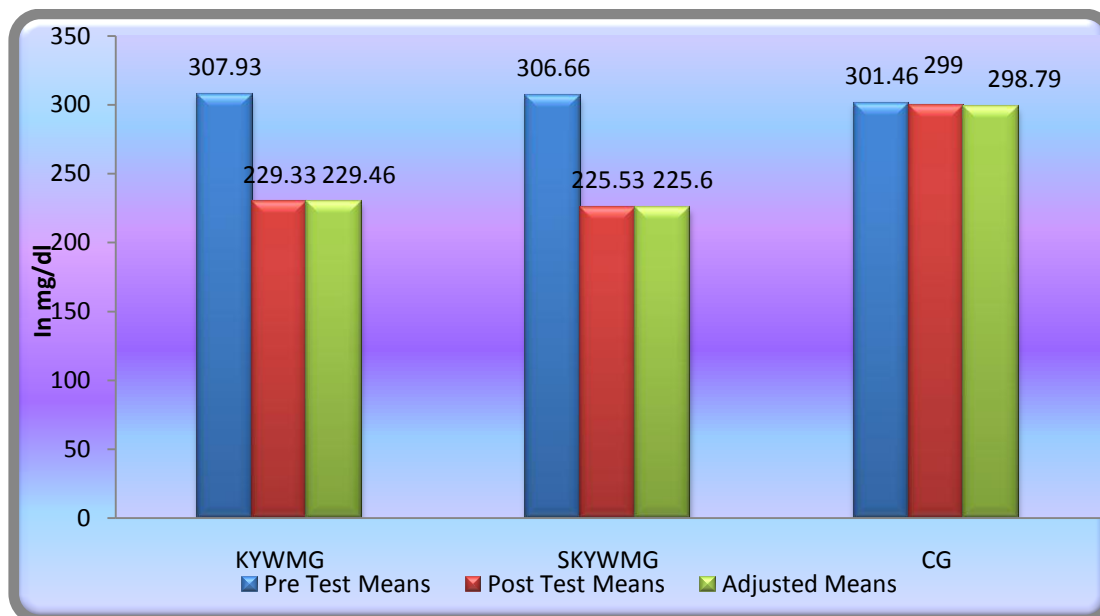
Adjusted Post-test means			Mean Difference	Required CI
KYWGMG	SKYWGMG	CG		
229.46	225.60	---	3.86	14.68
229.46	---	298.79	69.33*	
---	225.60	298.79	73.20*	

* Significant at 0.05 level

The multiple comparisons showed in Table VI proved that there existed significant differences between the adjusted means of kayakalpa yoga with meditation and control group (69.33), sky yoga with meditation and control group (73.20). There was no significant difference between kayakalpa yoga with meditation and

sky yoga with meditation (3.86) at 0.05 level of confidence with the confidence interval value of 14.68. The pre, post and adjusted means on post prandial plasma glucose were presented through bar diagram for better understanding of the results of this study in Figure-III.

Figure III. Pre post and adjusted post test differences of the, kayakalpa yoga with meditation, sky yoga with meditation and control groups on post prandial plasma glucose



Conclusions

In the light of the study undertaken with certain limitations imposed by the experimental conditions, the following conclusions were drawn.

1. The result of the study reveals that there was a significant improvement in the experimental groups on selected hematological variables when compared to the control group after the completion of twelve weeks of kayakalpa yoga with meditation and simplified kundalini yoga with meditation.
2. The result also reveals that simplified kundalini yoga with meditation group showed better improvement in RBC and post prandial plasma glucose than the other groups.
3. The result also reveals that kayakalpa yoga with meditation showed better improvement in fasting plasma glucose than the other groups.

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