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J Sabarinathan

Ph.D Scholar Department of
Physical Education and Sports
Pondicherry University,
Tamil Nadu, India

Dr. D Sakathiganavel

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

Effect of selected pranayama package on pulmonary cardiac and respiratory pressure variables on collegiate men

J Sabarinathan and Dr. D Sakathiganavel

Abstract

The purpose of the study was to find out the effect of selected Pranayama Package on Pulmonary Cardiac and Respiratory Pressure variables on Collegiate Men. for this study totally 60 collegiate men. Sixty male collage men were selected from Managular Vinayagar group institution Pondicherry. on a random purposive sampling. The collaget men age ranged from 18 years to 25 years as per their college records. The subjects were divided into fore groups group I (n=15) served as a vitalizing Pranayama training group, group II (n=15) is assigned to Balancing Pranayama training programme, group III (n=15) assigned to cooling Pranayama, group IV (n=15) is assigned to control group, for a period of twelve weeks for six days in a week. The experimental groups of the Pranayama are tested before and after the experimental training program me on the following selected criterion measures such as physiological and Pranayama performance is selected as variables to find out the collegiate men. The results of pre, post, adjust post the data collected were statistically examined by applying analysis of covariance (ANCOVA) to find out the difference. Whenever, the obtained 'F' ratio for inter action effect was found to be significant.

Keywords: Pranayama package training, pulmonary, cardiac, respiratory pressure variables

Introduction

Yoga is an ancient art based on a harmonizing system of development for the body, mind and spirit. It is a practical aid, not a religion. The continued practice of yoga will lead one to a sense of peace and well-being and also a feeling of being in harmony with one's environment. The word 'yoga' comes from the Sanskrit root "yuj", which means, "to join" or "to Yoke".. This requires an intense development of the will, so that all the automatic process of the body are bring fully under the control.

Pranayama

The Pranayama is the central part of Patanjali astanga yoga system. The Pranayama is derived from two Sanskrit words 'Prana' and 'ayama', where 'prana' means Energy 'ayama' means elongation. So the word meaning of Pranayama is elongation of pranic energy. Where as great Yogi Patanjali defines Pranayama.

Statement of the Problem

The purpose of the study was to find out the effect of selected Pranayama Package on Pulmonary Cardiac and Respiratory Pressure variables on Collegiate Men.

Methodology

Sixty male collage men were selected from Managular vinayagar group institution pondicherry. on a random purposive sampling. The collaget men age ranged from 18 years to 25 years as per their college records. The subjects were divided into fore groups group I (n=15) served as a vitalizing Pranayama training group, group II (n=15) is assigned to Balancing Pranayama training programme, group III (n=15) assigned to cooling Pranayama, group IV (n=15) is assigned to control group, for a period of twelve weeks for six days in a

Correspondence

J Sabarinathan

Ph.D Scholar Department of
Physical Education and Sports
Pondicherry University,
Tamil Nadu, India

week. the experimental groups of the Pranayama are tested before and after the experimental training program me on the following selected criterion measures such as physiological and Pranayama performance is selected as variables to find out the collegiate men.

Result and Statistical Analysis

The data collected were statistically examined by applying analysis of covariance (ANCOVA) to find out the difference. Whenever, the obtained ‘F ’ratio for inter action effect was found to be significant.

Table I: Computation of Analysis of Covariance Vitalizing Pranayama, Balancing Pranayama, Cooling Pranayama and Control Group on Pulmonary FEV 1

	Vitalizing Pranayama Group - I	Balancing Pranayama Group - II	Cooling Pranayama Group - III	Control Group - IV	Source of variane	Sum of squars	df	Mean squars	“F”	“P”
Pre-test Mean	2.39	2.49	2.50	2.16	B	1.11	3	0.37	1.67	0.183
S.D	0.41	0.35	0.36	0.67	W	12.41	56	0.22		
Post-test Mean	2.19	2.56	2.85	2.49	B	3.32	3	1.10	6.85*	0.001
S.D	0.54	0.33	0.31	0.38	W	9.05	56	0.16		
Adjust-post mean	2.19	2.53	2.81	2.57	B	2.94	3	0.98	7.18*	0.000
					W		55	0.13		

Significant at 0.05 levels

Required table value at 0.05 level of significant for 3 & 55 degree of freedom 2.77

The table shows there is no significant difference pre – test and it shows the table value 1.67 for post – test and 6.85 for adjusted post –test it is higher than the table value at 7.18 so

pre – test and adjusted post – test have significant.

Scheffe’s Post Hoc Test for Mean Difference between Groups on Pulmonary FEV1

Group	Group	Mean Difference	Std. Error	Sig
Group I	Group II	0.37333	0.14680	0.103
	Group III	0.66133	0.14680	0.001*
	Control group	2.29600	0.14680	0.266
Group II	Group I	0.37333	0.14680	0.103
	Group III	0.28800	0.14680	0.283
	Control group	0.07733	0.14680	0.964
Group III	Group I	0.66133	0.14680	0.001*
	Group II	0.28800	0.14680	0.289
	Control group	0.36533	0.14680	0.115

The mean difference is significant at the 0.05 level.

In Scheffe's test have significant different between group – I and group-III, group – II and control group. There is no different between remaining groups.

Graphical illustration of pretest, post test and Adjusted post test mean of control and experimental groups on pulmonary FEV1

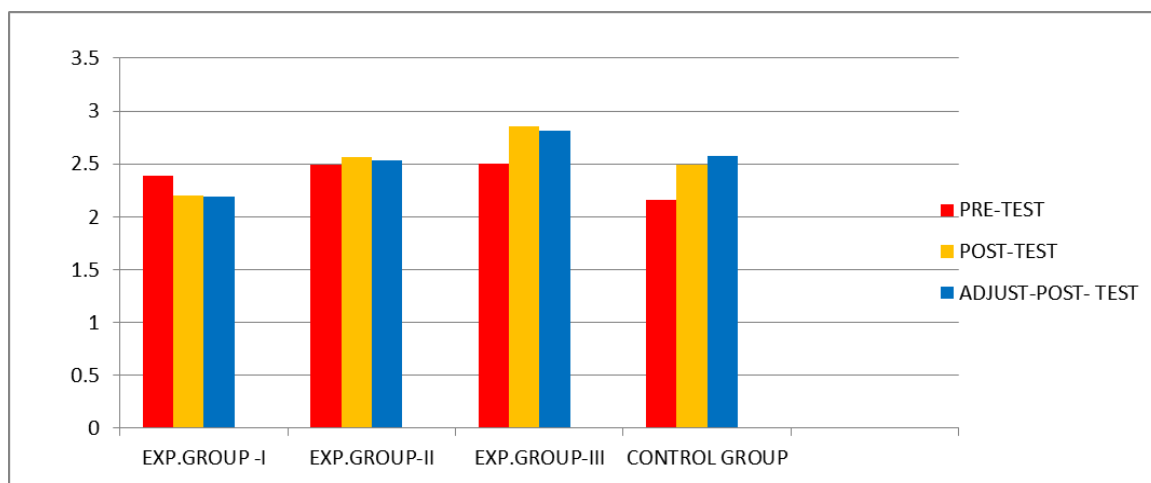


Fig 1

Table II: Computation of Analysis of Covariance Vitalizing Pranayama, Balancing Pranayama, Cooling Pranayama and Control Group on Pulmonary Peak Expiratory Flow Rate (PEFR)

	Vitalizing Pranayama Group - I	Balancing Pranayama Group - II	Cooling Pranayama Group - III	Control Group - IV	Source of variane	Sum of squars	df	Mean squars	“F”	“P”
Pre-test Mean	190.93	230.46	228.93	232.26	B	17745.11	3	5915.03	1.20	0.316
S.D	62.85	58.89	66.26	88.42	W	27480.53	56	4907.22		
Post-test Mean	160.20	175.80	207.66	248.40	B	68329.25	3	22776.41	5.49*	0.002
S.D	85.28	29.97	43.86	80.49	W	232053.73	56	4143.81		
Adjust-post mean	169.79	172.63	204.99	244.65	B		3	17959.33	4.85*	0.005
					W		55	3698.50		

Significant at 0.05 levels

Required table value at 0.05 level of significant for 3 & 55 degree of freedom 2.77

The table shows there is no significant difference pre – test and it shows the table value 1.20 for post – test and 5.49 for adjusted post –test it is higher than the table value at 4.85 so

pre – test and adjusted post – test have significant.

Scheffe’s Post Hoc Test for Mean Difference between Groups on Pulmonary Peak Expiratory Flow Rate (PEFR)

Group	Group	Mean Difference	Std. Error	Sig
Group I	Group II	15.60000	23.50551	0.931
	Group III	47.46667	23.50551	0.265
	Control group	88.20000	23.50551	0.005*
Group II	Group I	15.60000	23.50551	0.931
	Group III	31.86667	23.50551	0.610
	Control group	72.60000	23.50551	0.031*
Group III	Group I	47.46667	23.50551	0.265
	Group II	31.86667	23.50551	0.610
	Control group	40.73333	23.50551	0.399

The mean difference is significant at the 0.05 level.

In Scheffe's test have significant different between group – I and control group, group – II and control group. There is no different between remaining groups.

Graphical illustration of pretest, post test and Adjusted post test mean of control and experimental groups on pulmonary Peak Expiratory Flow Rate (PEFR)

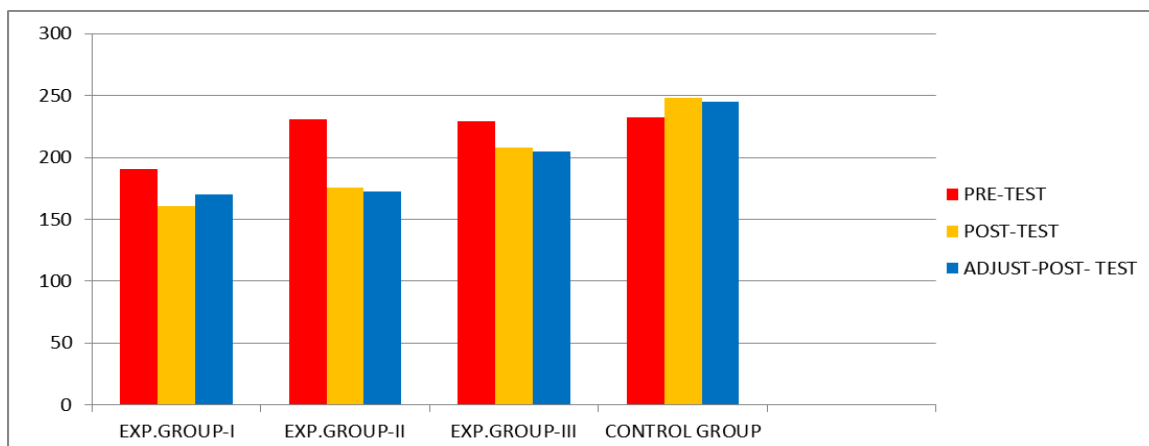


Fig II

Table III: Computation Of Analysis Of Covariance Vitalizing Pranayama, Balancing Pranayama, Cooling Pranayama And Control Group On Cardiac Hart Rate

	Vitalizig Pranayama Group – I	Balancing Pranayama Group – II	Cooling Pranayama Group – III	Control Group – IV	Source of variane	Sum of squars	df	Mean squars	“F”	“P”
Pre-test Mean	74.00	73.80	72.53	72.13	B	38.31	3	12.77	1.35	0.268
S.D	2.80	2.67	3.88	2.77	W	529.86	56	9.46		
Post-test Mean	70.00	71.73	69.73	71.60	B	49.26	3	16.42	3.22*	0.029
S.D	1.85	2.98	1.83	2.16	W	285.46	56	5.09		
Adjust-post mean	69.96	71.70	69.75	71.64	B	49.59	3	16.53	3.19*	0.030
					W		55	5.17		

Significant at 0.05 levels

Required table value at 0.05 level of significant for 3 & 55 degree of freedom 2.77

The table shows there is no significant difference pre – test and it shows the table value 1.35 for post – test and 3.22 for adjusted post –test it is higher than the table value at 3.19 so

pre – test and adjusted post – test have significant.

Scheffe’s Post Hoc Test for Mean Difference between Groups on Cardiac Hart Rate

Group	Group	Mean Difference	Std. Error	Sig
Group I	Group II	1.73333	0.82443	0.232
	Group III	0.26667	0.82443	0.991
	Control group	1.60000	0.82443	0.298
Group II	Group I	1.73333	0.82443	0.232
	Group III	2.00000	0.82443	0.130
	Control group	0.13333	0.82443	0.999
Group III	Group I	0.26667	0.82443	0.991
	Group II	2.00000	0.82443	0.130
	Control group	1.86667	0.82443	0.176

The mean difference is significant at the 0.05 level.

In Scheffe's test have significant different. There is no different between remaining groups.

Graphical Illustration of Pretest, Post Test and Adjusted Post Test Mean Of Control and Experimental Groups on Cardiac Hart Rate

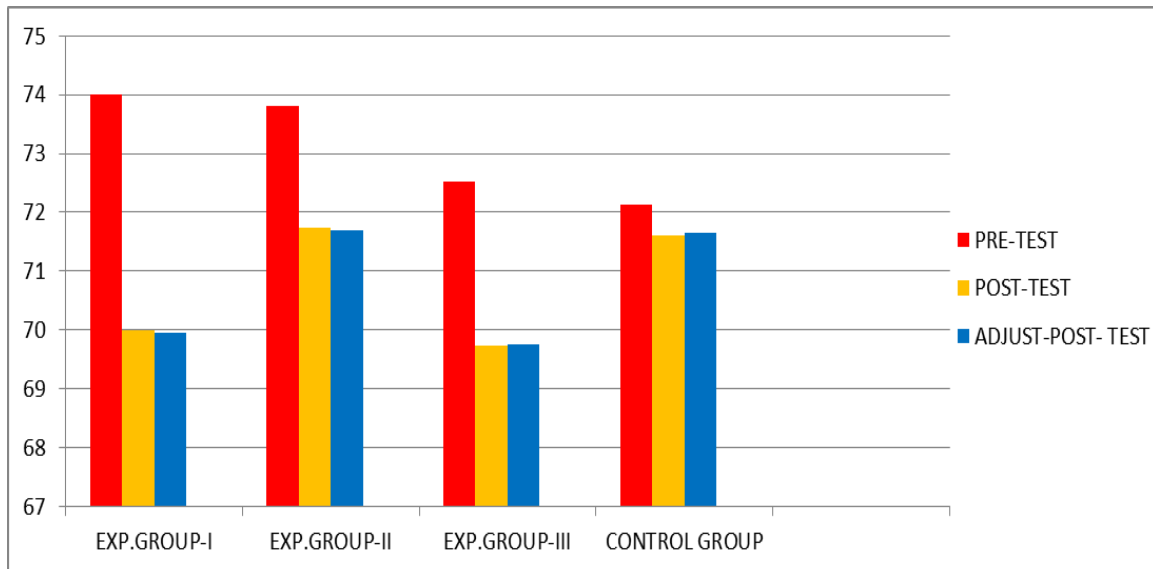


Fig III

Table IV: Computation Of Analysis Of Covariance Vitalizing Pranayama, Balancing Pranayama, Cooling Pranayama And Control Group On Respiratory Pressure Breath Holding

	Vitalizig Pranayma Group - I	Balancing Pranayama Group - II	Cooling Pranayama Group - III	Control Group - IV	Source of variane	Sum of squars	df	Mean squars	“F”	“p”
Pre-test Mean	14.59	20.57	15.50	19.05	B	363.53	3	121.17	1.70	0.177
S.D	6.76	11.50	4.26	9.42	W	3992.14	56	71.28		
Post-test Mean	16.55	24.79	17.24	20.74	B	643.23	3	214.41	3.23*	0.029
S.D	7.20	10.37	4.25	9.35	W	3713.31	56	66.30		
Adjust-post mean	18.94	22.14	18.86	19.38	B	102.82	3	34.27	2.15	0.104
					W		55	15.94		

Significant at 0.05 levels

Required table value at 0.05 level of significant for 3 & 55 degree of freedom 2.77

The table shows there is no significant difference pre – test

and it shows the table value 1.70 for post – test and 3.23for adjusted post –test it is low her than the table value at 2.15 so pre – test and adjusted post – test have no significant.

Scheffe’s Post Hoc Test for Mean Difference between Groups on Respiratory Pressure Breath Holding

Group	Group	Mean Difference	Std. Error	Sig
Group I	Group II	8.23800	2.97342	0.064
	Group III	0.69000	2.97342	0.997
	Control group	4.19333	2.97342	0.578
Group II	Group I	8.23800	2.97342	0.064
	Group III	7.54800	2.97342	0.104
	Control group	4.04467	2.97342	0.607
Group III	Group I	0.69000	2.97342	0.997
	Group II	7.54800	2.97342	0.104
	Control group	3.50333	2.97342	0.709

The mean difference is significant at the 0.05 level.

In Scheffe's test have significant different. There is no different between remaining groups.

Graphical Illustration of Pretest, Post Test and Adjusted Post Test Mean Of Control and Experimental Groups on Respiratory Pressure Breath Holding

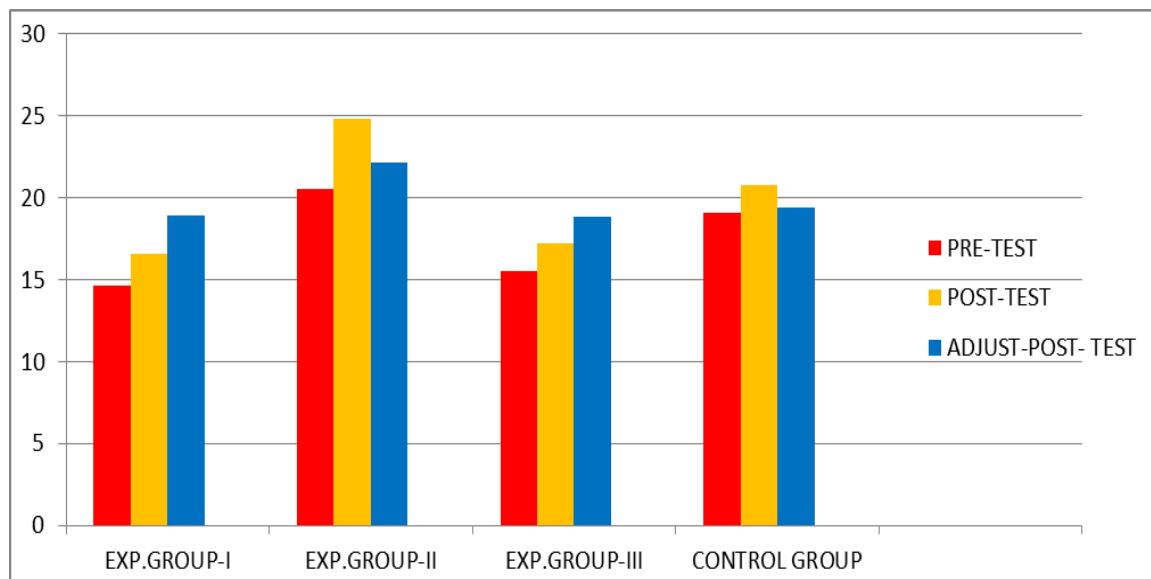


Fig IV

Discussion of Hypothesis

The hypothesis the there will be significant change in the effect of selected Pranayama package on pulmonary cardiac and respiratory pressure on collegiate men.

The findings of the study showed that there would be significant improvement in selected physiological variables such as pulmonary cardiac and respiratory pressure on collegiate men from their base line of pre - test to post - test due the influence of vitalizing, balancing, and cooling Pranayama practice. Hence the first null hypothesis was accepted on the above said variables.

Conclusion

1. The Vitalizing Pranayama practice had shown significant improvement in all the selected, physiological and pulmonary variables among the collegiate men.
2. The Balancing Pranayama practice had shown significant improvement in all the selected physiological and cardiac variables among the collegiate men.
3. The Cooling Pranayama practice had shown significant improvement in all the selected physiological and respiratory pressure variables among the collegiate men.
4. There is no significant different found in control group in the pre - test and post -test practice time.

Recommendation

1. The same study may be experimented on various level of age group like 18 to 25 adult person act.
2. same study may be experimented on collegiate men to asses their level in the selected variables.
3. A similar study may be experimental on different yoga and asana.
4. The same study may be experimental in grater detail to asses change on biochemical, hematological and physical fitness variables.

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