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

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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 collage t men age ranged from 18 years to 25 years as per their college records. The subjects were divided into four 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. Whereas great Yogi Patanjali defines Pranayama.

Vitalizing pranayama
Pranayama to cleanse and active the body and mind for increased alertness and energy. Our old breathing pattern may not be proper in terms of length of inhale and exhale, which means the prana flow is not at its optimum level vitalizing Pranayama deletes the old pattern of breathing so that a new pattern can be installed.

Balancing pranayama
Her is where we re-install the proper braeathing pattern to balance the right and left hemispheres of the brain activity, sympathetic and parasympathetic nervous system, prana shakti and manas shakti (vital and mental force). The left and right nostrils become equally active which naturally extends the period of awakened spiritual energy thereby increasing creativity and the blissfulness.

Cooling pranayama

The cooling breath is a technique used in yoga to regulate the body temperature and calm the mind, and is particularly useful in hot weather. It is a form of Pranayama, or yogic breathing exercise.

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 collage t men age ranged from 18 years to 25 years as per their college records. The subjects were divided into four 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 **i**s 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 1: computation of analysis of covariance vitalizing pranayama, balancing pranayama, cooling pranayama and control group on pulmonary FVC

	Vitalizing Pranayama Group - I	Balancing Pranayama Group - II	Cooling Pranayama Group - III	Control Group - IV	Source of variance	Sum of square	DF	Mean squars	"F"	"P"
Pre-test Mean	2.60	2.59	2.71	2.27	B	1.60	3	0.53	1.87	0.144
S.D	0.77	0.34	0.33	0.54	W	15.94	56	0.28		
Post-test Mean	3.22	3.17	3.11	2.74	B	2.12	3	0.70	7.35*	0.000
S.D	0.19	0.19	0.22	0.50	W	5.38	56	0.09		
Adjust-post mean	3.21	3.16	3.07	2.82	B	1.26	3	0.42	5.51*	0.002
					W		55	.076		

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 1.87 for post – test and 7.35 for adjusted post –test it is higher than the table value at 5.51 so pre – test and adjusted post – test have significant.

Scheffe's post hoc test for mean difference between groups on pulmonary FVC

	Group	Mean Difference	Std. Error	Sig
Group I	Group II	0.05400	0.11325	0.973
	Group III	0.10867	0.11325	0.820
	Control group	0.47933	0.11325	0.001*
Group II	Group I	0.05400	0.11325	0.973
	Group III	0.05467	0.11325	0.972
	Control group	0.42533	0.11325	0.005*
Group III	Group I	0.10867	0.11325	0.820
	Group II	0.05467	0.11325	0.972
	Control group	0.37067	0.11325	0.020*

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, group – III and control group. There is no different between remaining groups.

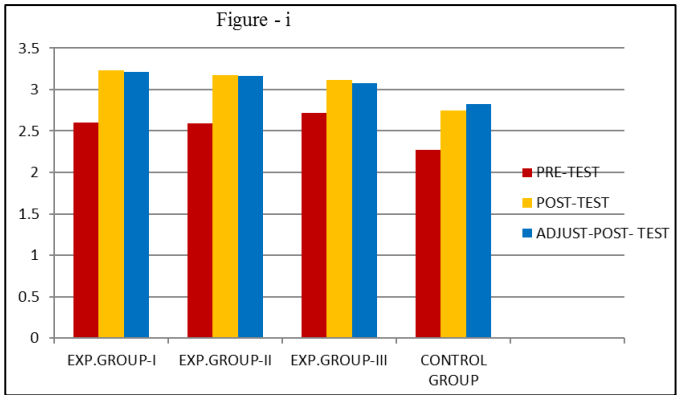

Fig 1: Graphical Illustration of Pre-test, Post Test and Adjusted Post Test Mean of Control and Experimental Groups on Pulmonary FVC

Table 2: computation of analysis of covariance vitalizing pranayama, balancing pranayama, cooling pranayama and control group on cardiac blood pressure systolic

	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	120.60	120.06	177.40	120.80	B	111.65	3	37.21	1.77	0.163
S.D	2.16	6.19	4.82	4.21	W	1176.53	56	21.01		
Post-test Mean	117.20	117.00	117.40	121.66	B	225.65	3	75.21	11.34*	0.000
S.D	2.59	2.26	2.74	2.66	W	371.33	56	6.63		
Adjust-post mean	117.13	116.97	117.57	121.58	B	214.26	3	71.42	10.76*	0.000
					W		55	6.63		

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 1.77 for post – test and 11.34 for adjusted post –test it is higher than the table value at 10.76 so pre – test and adjusted post – test have significant.

Scheffe's post hoc test for mean difference between groups on cardiac blood pressure systolic

Group	Group	Mean Difference	Std. Error	Sig
Group I	Group II	0.20000	0.94028	0.997
	Group III	0.20000	0.94028	0.997
	Control group	4.26667	0.94028	0.000*
Group II	Group I	0.20000	0.94028	0.997
	Group III	0.40000	0.94028	0.980
	Control group	4.66667	0.94028	0.000*
Group III	Group I	0.20000	0.94028	0.997
	Group II	0.40000	0.94028	0.980
	Control group	4.26667	0.94028	0.001*

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, group – III and control group. There is no different between remaining groups.

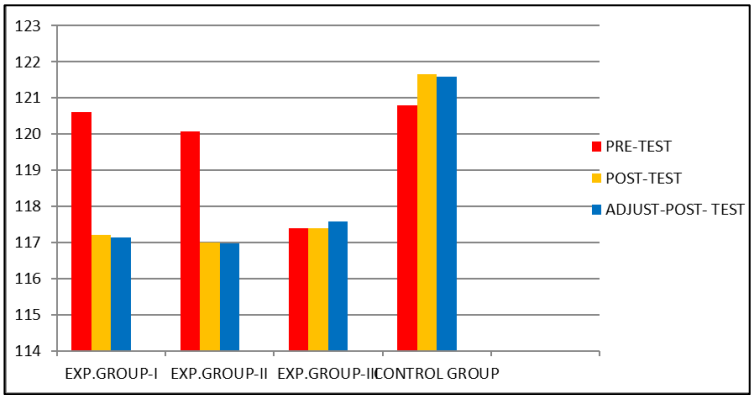

Fig 2: graphical illustration of pretest, post-test and adjusted post-test mean of control and experimental groups on cardiac blood pressure systolic

Table 3: computation of analysis of covariance vitalizing pranayama, balancing pranayama, cooling pranayama and control group on cardiac blood pressure diastolic

	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	73.40	75.60	74.53	73.93	B	40.06	3	13.35	0.87	0.460
S.D	3.69	3.56	3.99	4.33	W	855.86	56	15.28		
Post-test Mean	70.73	71.06	74.60	75.60	B	272.93	3	90.97	13.44*	0.000
S.D	1.79	1.90	3.29	3.06	W	379.06	56	6.76		
Adjust-post mean	70.56	71.27	74.62	75.52	B	268.61	3	89.53	13.90*	0.000
					W		55	6.43		

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 0.87 for post – test and 13.44 for adjusted post –test it is higher than the table value at 13.90 so pre – test and adjusted post – test have significant.

Scheffe's post hoc test for mean difference between groups on cardiac blood pressure systolic

Group	Group	Mean Difference	Std. Error	Sig
Group I	Group II	0.20000	0.94028	0.997
	Group III	0.20000	0.94028	0.997
	Control group	4.26667	0.94028	0.000*
Group II	Group I	0.20000	0.94028	0.997
	Group III	0.40000	0.94028	0.980
	Control group	4.66667	0.94028	0.000*
Group III	Group I	0.20000	0.94028	0.997
	Group II	0.40000	0.94028	0.980
	Control group	4.26667	0.94028	0.001*

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, group – III and control group. There is no different between remaining groups.

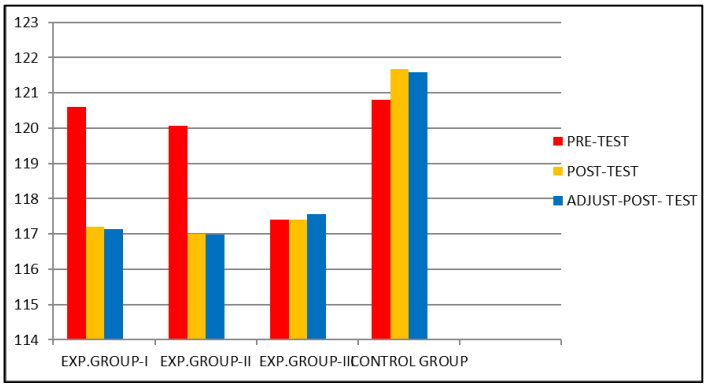

Fig 3: Graphical illustration of pre-test, post-test and adjusted post-test mean of control and experimental groups on cardiac blood pressure systolic

Table 4: computation of analysis of covariance vitalizing pranayama, balancing pranayama, cooling pranayama and control group on respiratory pressure inspiration

	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	2.78	3.51	2.80	3.17	B	5.41	3	1.80	2.15	' 0.103
S.D	1.19	1.06	0.57	0.67	W	46.87	56	0.83		
Post-test Mean	4.22	4.60	3.85	3.75	B	6.64	3	2.21	3.80*	0.015
S.D	1.03	0.78	0.28	0.74	W	32.62	56	0.58		
Adjust-post mean	4.39	4.32	4.02	3.69	B	4.64	3	1.54	5.67*	0.002
					W		55	0.27		

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 2.15 for post – test and 3.80 for adjusted post –test it is higher than the table value at 5.67 so pre – test and adjusted post – test have significant.

Scheffe's post hoc test for mean difference between groups on respiratory pressure inspiration

Group	Group	Mean Difference	Std. Error	Sig
Group I	Group II	0.38133	0.27871	0.602
	Group III	0.36400	0.27871	0.638
	Control group	0.46333	0.27871	0.437
Group II	Group I	0.38133	0.27871	0.602
	Group III	0.74533	0.27871	0.079
	Control group	0.84467	0.27871	0.035*
Group III	Group I	0.36400	0.27871	0.638
	Group II	0.74533	0.27871	0.079
	Control group	0.09933	0.27871	0.988

The mean difference is significant at the 0.05 level.

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

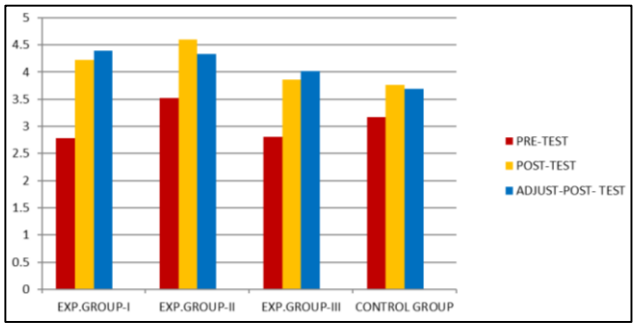

Fig 4

Table 5: computation of analysis of covariance vitalizing pranayama, balancing pranayama, cooling pranayama and control group on respiratory pressure expiration

	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	3.88	3.91	3.33	3.83	B	2.50	3	0.83	1.38	0.256
S.D	0.82	0.79	0.53	0.81	W	33.67	56	0.60		
Post-test Mean	4.83	5.68	4.07	5.21	B	16.83	3	5.61	4.34 *	0.008
S.D	1.09	1.31	0.65	1.20	W	72.30	56	1.29		
Adjust-post mean	4.79	5.63	4.24	5.19	B	12.29	3	4.09	3.35*	0.025
					W		55	1.22		

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 1.38 for post – test and 4.34 for adjusted post –test it is higher than the table value at 3.35 so pre – test and adjusted post – test have significant.

Scheffe's post hoc test for mean difference between groups on respiratory pressure exsperation

Group	Group	Mean Difference	Std. Error	Sig
Group I	Group II	0.84600	0.41491	0.257
	Group III	0.76567	0.46388	0.443
	Control group	0.38083	0.38811	0.810
Group II	Group I	0.84600	0.41491	0.257
	Group III	1.61167	0.46388	0.012*
	Control group	0.46517	0.38811	0.698
Group III	Group I	0.76567	0.46388	0.443
	Group II	1.61167	0.46388	0.012*
	Control group	1.14650	0.44008	0.091

The mean difference is significant at the 0.05 level.

In Scheffe's test have significant different between group – II and group-III, group – III and group-II. 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 exsperation

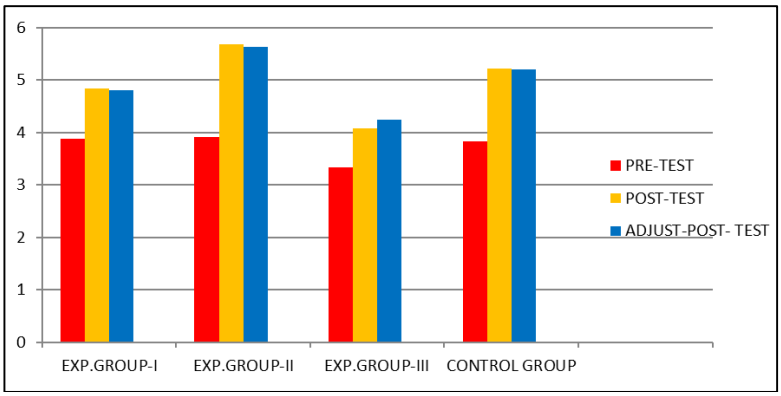

Fig 5

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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