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Repercussions of Surya-Namaskar on physiological characteristics of men

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Abstract

The ongoing audit was embraced to separate the effect of Surya-Namaskar on physiological variable of school young fellows, from Birla Nagar Football Club Gwalior. The expert has picked 50 school young fellows for this audit and they were for arbitrary reasons parceled in to two social affairs of Twenty five each, out of which pack I (N-25) Underwent Surya-Namaskar, and bundle II (N-25) Underwent control pack. Pre-test were coordinated for all of the two social affairs on beat rate and breathe in holding limit. The exploratory social event participated in their different Surya-Namaskar for a period of about a month and a half. Post-test were driven on the recently referenced subordinate variables following a month and a portion of the planning time period. The t test was use to sort out the effect of Surya-Namaskar on physiological variable of school young fellows. The outcomes of the survey show significant difference in Respiration Rate, Lung Capacity, Vital capacity, Blood Pressure & Pulse rate for pre & post-test. It is finally deduced that the fixed young fellows could get Weight and Heart related issues due to lacking movement, Suryanamaskar and other proactive undertakings.

Keywords: Surya-Namaskar, pulse rate, breath holding capacity

Introduction

The far and wide need and meaning of everyday Surya-Namaskar productively organized and known as Surya-Namaskar can't be neglected in that frame of mind in the ongoing present day very progressed fake world. Because of the manifestations of the man-made machines the man himself has made its organs frail to the point that its perseverance has been in hazardous situation coming about less future and various serious life killing ailments like Obesity, Blood sugar, Heart Disease, etc. One of the difficult issues they are standing up to the present time is to control their body Wight in view of idleness. To overcome the above issue they embrace backup course of action and basic systems to reduce their weight by taking various solutions or crash diets to lose bothersome fat and work on their prosperity. Considering this quirk. The upsides of Surya-Namaskar have been dismissed". The most notable Surya-Namaskar helps with chipping away at cardiovascular system and reduces fat and weight^[1].

"The ongoing discussion is as indicated by the further foster physiological health thought Surya-Namaskar just, Because Surya-Namaskar has surest answers for man's physical as well as mental sicknesses. It makes the organs of the body dynamic in their working and has extraordinary effect of inside working of the human body. A part from being useful, it is delight experience coordinating the body, mind and soul. The best advantage of these activities is that Surya-Namaskar the organs of our body like the lungs, glandular system, liver, and Pancreas, Thyroid, Genital and Urinary structures and stays aware of them in astounding prosperity all through our future. This reason I found specific way to deal with the work on physiological wellbeing without expenses and review of the upside of Surya-Namaskar on

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¹ Jayaram Gadham1*, Srikanth Sajja1, V. Rooha2 Dr Madanmohan Effect of Yoga on obesity, hypertension and lipid profile, International Journal of Research in Medical Sciences | May 2015 | Vol 3 | Issue 5 Page 1061-1065

individual encountering physiological” issue [2].

Steps in Surya-Namaskar

“The members were prepared to perform Surya-Namaskar in a sluggish way so every one of the 12 stances was held for term of 30 seconds. Each round required 6 minutes to finish and 5 rounds were acted in 30-40 minutes. Surya-Namaskar pre preparing was allowed for seven days by a yoga coach and the exhibition of Surya-Namaskar was examined utilizing execution outline. Practice began at (6.00 am) while starving in a clean”.

Purpose of the study

The motivation behind the review is to concentrate on the impact of Surya-Namaskar on physiological variable of school going children. Physiological variable including Respiration Rate, Lung Capacity, Vital capacity, Blood Pressure & Pulse rate and work on their physiological wellness through Surya-Namaskar without consumption. Since Surya-Namaskar are extremely viable in tossing our body executive fat and in enacting our organs and to fix the different illness and work on physiological wellness.”

Hypotheses

It is hypothesized that there must be some effect of Surya-Namaskar on physiological variable of school boys.

Significance of the study

The current review would be significant for public wellbeing as the consequences of this study will battle on the convoluted sickness and helpful for keep up with wellbeing without use be given a positive outcomes for society.

Sources of data

“ To execute this examination the agent haphazardly chose Fifty understudies. On just having a place with the age gathering of 11-14 years from Birla Nagar Football Club Gwalior they were separated in to two equivalent gatherings of 25 subjects each and relegated as an Experimental Group-I, and Control Group.”

Selection of variables

Dependent variables

1. Respiration Rate.
2. Lung Capacity.
3. Vital capacity.
4. Blood Pressure.
5. Pulse rate.

Independent variables

1. Experimental Group-I –Surya-Namaskar

Experimental design

“The review was figured out as a genuine irregular gathering comprising of pre-test and post-test for this reason in Gwalior City (Birla Nagar Football Club Gwalior). 50 Student analyzed and chose fifty subjects were haphazardly separated in to two gatherings of Twenty five each, out of which bunch I (N-25) Surya-Namaskar and bunch II (N-25) stayed as control. Pre-test were led for each of the two gatherings on beat rate and breath holding limit. The exploratory gathering partook in their separate activity for a time of about a month and a half.

² Chaya MS, Kurpad AV, Nagendra HR, Nagarathna R. The effect of long term combined yogapractice on the basalmatabolic rate of healthy adults. BMC Complement Altern Med. 2006;6:28

Post-test were led on the previously mentioned subordinate factors following a month and a half of the preparation time frame. The preparation modified was booked at morning 6.00 a.m. to 7.00 a.m. Assortment of information for estimating Respiration Rate, Lung Capacity, Vital capacity, Blood Pressure & Pulse rate.”

Statistical Analysis

“The Analysis of mean qualities and SD. The 't' test was utilized. An importance level of $p < 0.05$ was thought of as essentially unique. Information was examined utilizing SPSS. 't' test factual methods was use to figure out the impact of Surya-Namaskar on physiological variable of school young men.”

Table 1: Mean, Standard Deviation (SD) of Pulse Rate of Experimental and Control Groups

		Pre	Post	t. ratio
Experimental Group of Suryanamaskar Training	Mean	18.80	16.25	-18.89*
	S.D	1.36	1.29	
Control Group	Mean	18.50	18.35	-0.90*
	S.D	1.43	1.39	

Table 1: T-ratio of pre and post respiration rate of men in experimental group and control group

*Significant at.05 level

T-value required to be significant at 19 DF = 2.09

It is evident from Table 1 that significant difference was found in suryanamaskar training effect between pre and post respiration rate of men in the experimental group as the t-value was found -18.89. This was a higher value than the required value at.05 level of significance, but an insignificant difference was found between pre and post respiration rate of men in the control group as the t-value was found -0.90. This was a lower value than the required value at.05 level of significance.

The scores are also illustrated in the Fig.1.

To find out Suryanamaskar training effect between pre and post lung capacity of men in the experimental group and control group, Dependent t-test statistics was used and presented in table-2

Table 2: T-ratio of pre and post lung capacity of men in experimental group and control group

		Pre	Post	t. ratio
Experimental Group of Suryanamaskar Training	Mean	3978.75	4294.20	47.93*
	S.D	104.01	111.76	
Control Group	Mean	3898.50	3900.05	1.42*
	S.D	183.28	185.32	

*Significant at.05 level

t-value required to be significant at 19 DF = 2.09

It is evident from table-2 that significant difference was found in Suryanamaskar training effect between pre and post lung capacity of men in the experimental group as the t-value was found 47.93. This was a higher value than the required value at.05 level of significance, but an insignificant difference was found between pre and post lung capacity of men in the control group as the t-value was found 1.42. This was a lower value than the required value at.05 level of significance.

The scores are also illustrated in the Fig.2.

To find out Suryanamaskar training effect between pre and post vital capacity of men in the experimental group and control group, Dependent t-test statistics was used and presented in Table 3.

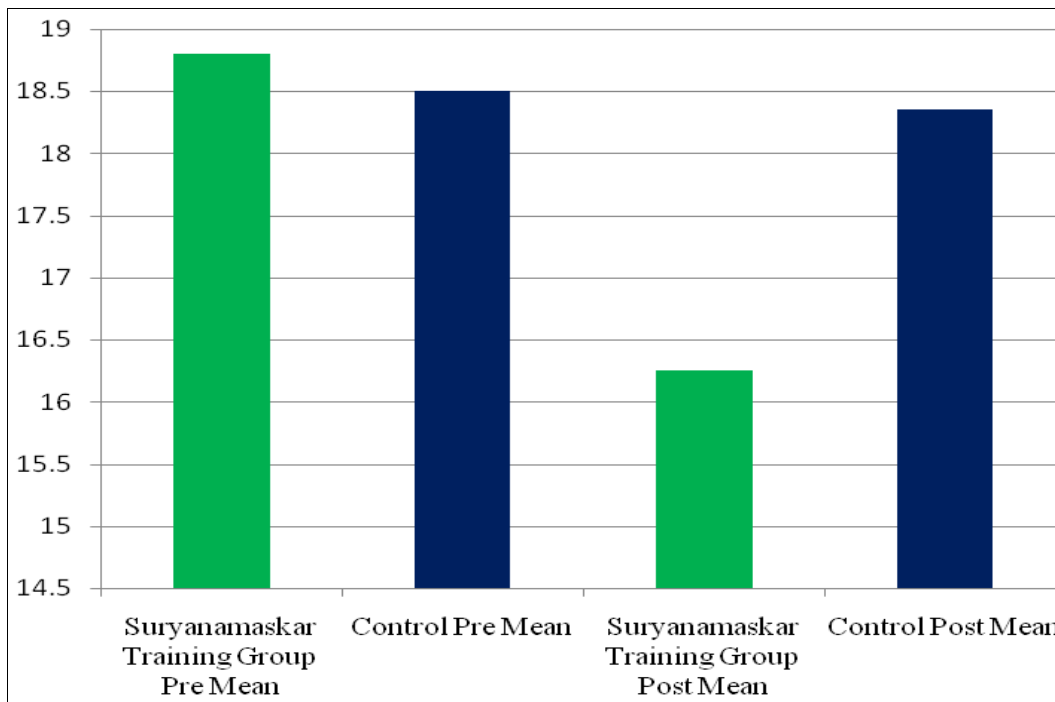


Fig 1: Pre and Post respiration rate of men in experimental group and control group

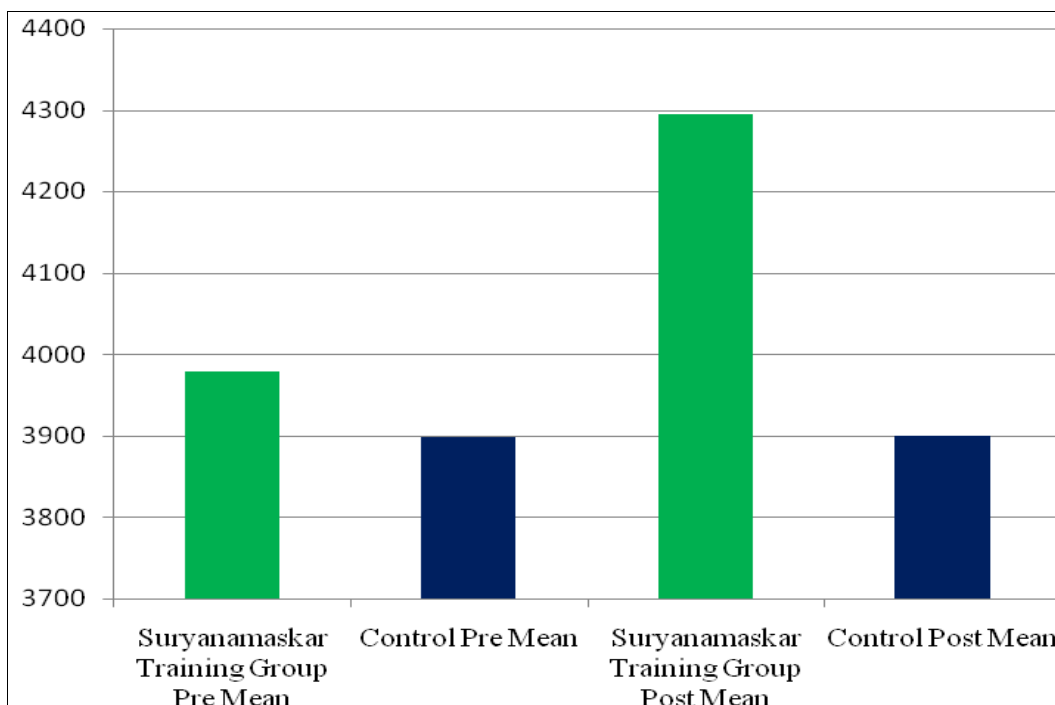


Fig 2: Pre and Post lung capacity of men in experimental group and control group

Table 3: T-ratio of pre and post vital capacity of men in experimental group and control group

Speed		Pre	Post	t. Ratio
Experimental Group of Suryanamaskar Training	Mean	3104.75	3281	54.47*
	S.D	90.88	99.25	
Control Group	Mean	3117.25	3116	1.31*
	S.D	98.23	95.83	

*Significant at.05 level
t-value required to be significant at 19 DF = 2.09

It is evident from table-3 that significant difference was found in Suryanamaskar training effect between pre and post vital capacity of men in the experimental group as the t-value was found 54.47. This was a higher value than the required value at.05 level of significance, but an insignificant difference was found between pre and post vital capacity of men in the control group as the t-value was found 1.31. This was a lower value than the required value at.05 level of significance. The scores are also illustrated in the Fig-3.

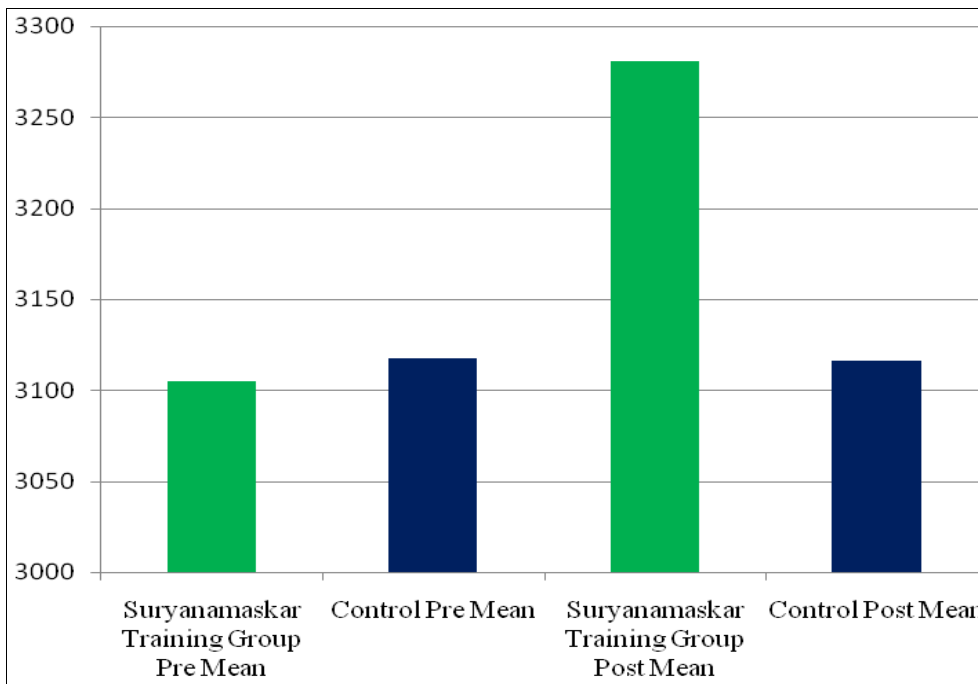


Fig 3: Pre and Post vital capacity of men in experimental group and control group

To find out suryanamaskar training effect between pre and post systolic blood pressure of men in the experimental group

and control group, Dependent t-test statistics was used and presented in Table 4.

Table 4: T-ratio of pre and post systolic blood pressure of men in experimental group and control group

Speed		Pre	Post	t. ratio
Experimental Group of Suryanamaskar Training	Mean	126.20	123.15	-7.74*
	S.D	6.22	5.30	
Control Group	Mean	128.65	128.90	.96*
	S.D	5.96	5.47	

*Significant at.05 level
t-value required to be significant at 19 DF = 2.09

It is evident from table-4 that significant difference was found in suryanamaskar training effect between pre and post systolic blood pressure of men in the experimental group as the t-value was found -7.74. This was a higher value than the required value at.05 level of significance, but an insignificant

difference was found between pre and post systolic blood pressure of men in the control group as the t-value was found.96. This was a lower value than the required value at.05 level of significance.

The scores are also illustrated in the Fig 4.

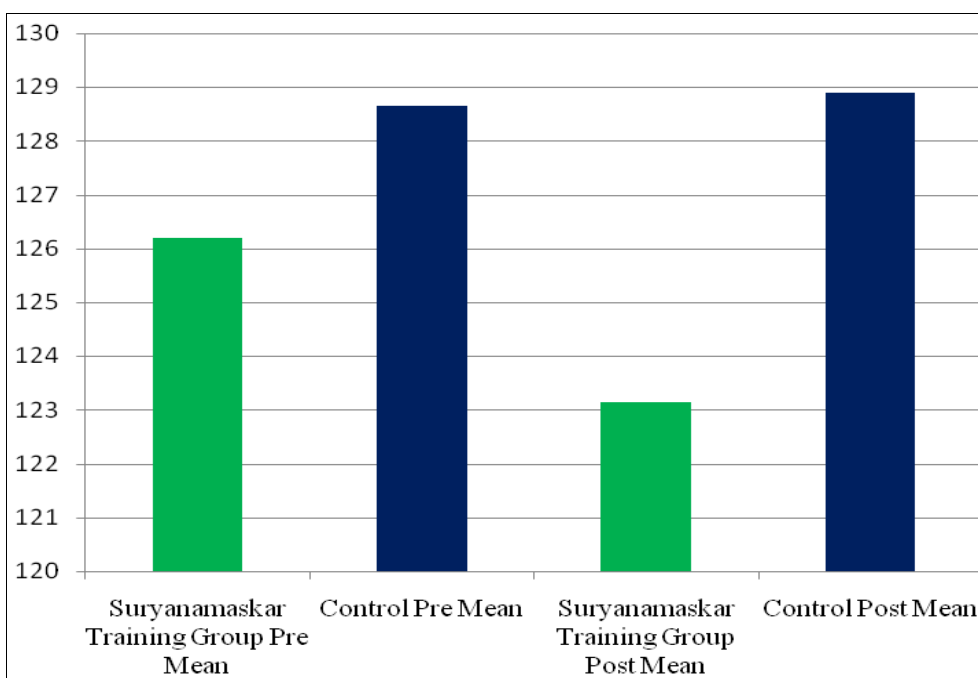


Fig 4: Pre and Post systolic blood pressure of men in experimental group and control group

To find out Suryanamaskar training effect between pre and post diastolic blood pressure of men in the experimental

group and control group, Dependent t-test statistics was used and presented in Table 5.

Table 5: T-ratio of pre and post diastolic blood pressure of men in experimental group and control group

Speed		Pre	Post	t. ratio
Experimental Group of Suryanamaskar Training	Mean	74.75	76.75	3.53*
	S.D	3.61	2.17	
Control Group	Mean	74.30	74.35	.29*
	S.D	2.79	2.45	

*Significant at.05 level
t-value required to be significant at 19 DF = 2.09

It is evident from table-5 that significant difference was found in suryanamaskar training effect between pre and post diastolic blood pressure of men in the experimental group as the t-value was found 3.53. This was a higher value than the required value at.05 level of significance, but an insignificant

difference was found between pre and post diastolic blood pressure of men in the control group as the t-value was found.29. This was a lower value than the required value at.05 level of significance.

The scores are also illustrated in the Fig 5.

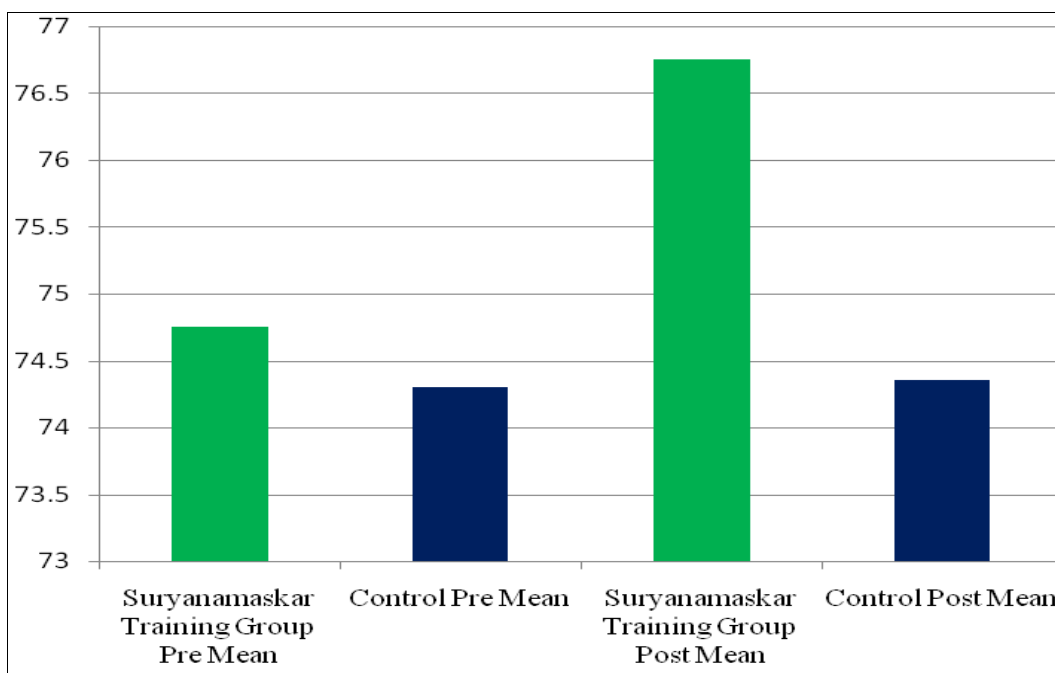


Fig 5: Pre and Post diastolic blood pressure of men in experimental group and control group

To find out Suryanamaskar training effect between pre and post pulse rate of men in the experimental group and control

group, Dependent t-test statistics was used and presented in Table 6.

Table 6: T-ratio of pre and post pulse rate of men in experimental group and control group

Speed		Pre	Post	t. ratio
Experimental Group of Suryanamaskar Training	Mean	79.55	76.65	-11.59*
	S.D	3.72	3.10	
Control Group	Mean	79.90	79.95	.33*
	S.D	3.45	3.46	

*Significant at.05 level
t-value required to be significant at 19 DF = 2.09

It is evident from table-6 that significant difference was found in Suryanamaskar training effect between pre and post pulse rate of men in the experimental group as the t- value was found -11.59. This was a higher value than the required value at.05 level of significance, but an insignificant difference was

found between pre and post pulse rate of men in the control group as the t-value was found.33. This was a lower value than the required value at.05 level of significance.

The scores are also illustrated in the Fig 6.

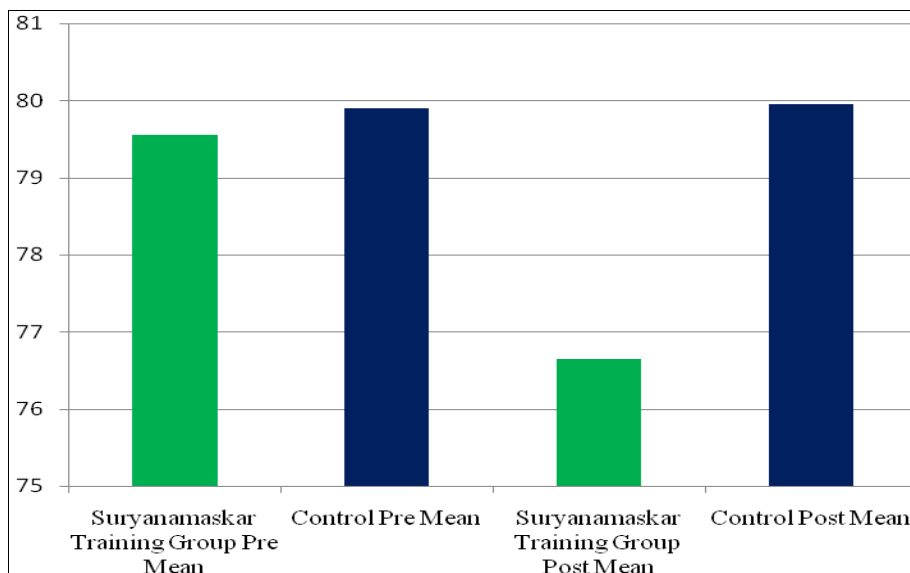


Fig 6: Pre and Post pulse rate of men in experimental group and control group

Discussion on Findings

“The present study was designed to the effect of suryanamaskara on physiological characteristics i.e respiration rate, lung capacity, vital capacity, blood pressure and pulse rate of the men. Although the research scholar did not interfere with the personal lifestyle of the subjects, some facts may be inaccessible. Which suryanamaskara training was more beneficial in looking at the lifestyle of subjects and making their lifestyle more effective, it has been seen in this study. In order to achieve the objectives, various physiological characteristics of subjects were collected from various scientific aspects and after that the subjects were divided into two groups i.e. one control and one is experimental group for the study. After which these groups were trained, after that data were obtained from all these groups again. Before going to the conclusion of the study, it must be understood that the progress of any country depends on its generation. His positive contribution definitely helps any society or country to move in the right direction.

The result of the study revealed significant difference between the mean scores of suryanamaskara training effect on pre and post physiological characteristics (Respiration rate, lung capacity, vital capacity, blood pressure and pulse rate) of subjects in the experimental group. The mean score of suryanamaskara training subjects group were found higher than the control group subjects, The results of this study also point to the same. The result of present study is also on the line of the studies conducted by Mohan Madan & Bhavanani A.B. (2013). It was recommended that suryanamaskar be used as an effective and in expensive method to improve pulmonary functions and general health of adolescent school children. Chaudhary Divesh & Ahsan Mohammad (2012)^[10] the result exposed that there was significant ($p < 0.05$) effect of yoga training on physiological characteristics of school students. Exercise of selected yoga training program also assisted to improve physiological characteristics of school students.”

Conclusion

“From our review we noticed a huge diminishing in Respiration Rate, Lung Capacity, Vital capacity, Blood Pressure & Pulse rate who were rehearsing Surya-Namaskar for a time of 90 days. Since Surya-Namaskar is a sure Asana's affect sure cardiovascular gamble factors like heftiness, hypertension and dyslipidemia. Randomized controlled preliminaries are expected to affirm and explain the impacts

of normalized yoga programs. There is a need to give a superior acknowledgment of yoga by the medical care local area as a supplement to traditional clinical consideration.”

References

1. Ahmed QR, Sau SK, Kar SK. An Evaluation of Pulmonary Parameters in Two Groups of Subjects during Yoga Practice, Nepal Med Coll J. 2010;12(3):180-2.
2. Amit Kauts, Sharma N. Effect of Yoga on Concentration and Memory In Relation To Stress, International Journal of Multidisciplinary Research. 2012, 2(5). ISSN 2231 5780.
3. Bharshankar JR, Bharshankar RN, Deshpande VN, Kaore SB, Gosavi GB. Effect of yoga on cardiovascular system in subjects above 40 years. Indian J Physiol Pharmacol. 2003;47:202-206.
4. Bhavanani AB, Madanmohan, Udupa K Acute. Effect of Mukhbhastrika (a yogic bellows type breathing) on reaction time. Indian J Physiol Pharmacol. 2003;47:297-300.
5. Bratton R. Effect of exercise on serum Enzyme levels in untrained males, The Research Quarterly, 1992, 33(2).
6. Brown SP, Clemons JM, He Q, Liu S. Effects of resistance exercise and cycling on recovery blood pressure. Journal of Sports Sciences. 1994;12:463-8.
7. Ewart CK, Young DR, Hagberg JM. The effect of three months yogic practices on ventilatory functions, Al Ameen Journal of Medical Sciences. 2012;5(2):197-202.
8. Chaya MS, Kurpad AV, Nagendra HR, Nagarathna R. The effect of long term combined yoga practice on the basalmetabolic rate of healthy adults. BMC Complement Altern Med. 2006;6:28.
9. Devasena I, Narhare P. Effect of Yoga on heart rate and blood pressure and its clinical significance. Int J Biol Med Res. 2011;2(3):750-3.
10. Chaudhary D, Mohammad A. Effect of Yoga Training on Physiological Characteristics of College Students', International Journal of Health, Sports and Physical Education. 2012;1(1):25-27.
11. Dr Madanmohan. Effect of yogic practices on different systems of human body yog research Journal; c2006. p. 202-210.
12. Gadham J, Sajja S, Rooha V, Madanmohan. Effect of Yoga on obesity, hypertension and lipid profile, International Journal of Research in Medical Sciences. 2015;3(5):1061-1065.