



ORIGINAL RESEARCH PAPER

Physical Education

BENEFIT OF YOGIC EXERCISE ON MIDDLE AGED FEMALES IN RELATION TO HAEMOGLOBIN COUNT.

KEY WORDS: Pranayama, Yogasana, Haemoglobin, Middle Aged Female,

Dr. Jyostnasis Ghosh

Assistant Professor in Physical Education, Barrackpore Rastraguru Surendranath College, Barrackpore, West Bengal

ABSTRACT

The purpose of the study was to find out the effect of pranayamas and other yogasanas on haemoglobin count of middle aged women. The subjects for this study were 40 in numbers, all female. All the subjects are the residents of barasat, north 24 pgs. The age of all the subjects were ranging between 35-42 years. For the purpose of the study, all the subjects were divided into two groups i.e experimental group and control group. In each group, there were equal numbers of subjects (20 experimental & 20 control). To find out the Effect of Pranayamas and Yogasanas on Haemoglobin Count of Middle Aged Females, Analysis of Covariance (ANCOVA) was used at .05 level of significance. The result of the present study which showed that there was a positive effect of Yogasanas and Pranayams on Haemoglobin count among middle aged Female as the tabulated tabulated "F" value was found to be significant at .05 level. In relation to post test, significant difference was observed among experimental and control group pertaining to Haemoglobin count of females.

INTRODUCTION

Pranayamas are breathing exercises developed by the ancient yogis for purification. Prana translates into "life force energy" and Yama translates into "control or mastery of." Thus, Pranyama is used to control, cultivate, and modify the Prana in the body. Prana is taken in through the air we breathe, and since the pranayama exercises increase the amount of air we take in, they also increase our intake of Prana.

For most pranayamas, the breath is slow and steady, breathed in and out of the nose and down into the belly. Always sit with a straight spine and a relaxed body. While you are practicing Pranayama, let go of any thoughts by focusing on the type of breathing involved with the pranayama.

Many physicians now a day's recommend pranayama to patients of heart and respiratory related matter. Not only that, the doctors also prescribed and strongly advice various types of asanas and pranayamas for the treatment of back pain, arthritis, depression and other chronic diseases.

Since the 1980s a number of studies have shown that various physiological responses are strongly associated with the cardio respiratory, metabolic, hormonal, neuromuscular and immunological system.

Haemoglobin (Hb) is contained in red blood cells and is capable of combining with oxygen in the lungs, transporting it to the tissues and releasing it there. Normally it is composed of 4 polypeptide chains combined with 4 radicals. When the haemoglobin is combined with oxygen it is said to be oxygenated. When it is not combined with oxygen it is deoxygenated (sometimes also called "reduced").

The lack of haemoglobin in the blood is the most essential issue with the middle aged female in our country. There are many reasons for reducing the level of haemoglobin in blood. With the help of medicine and proper dietary habit, it can be controlled. But from the early 2000' the doctors and other alternative medicine experts suggest the patients to utilize the power of pranayama and yogasana to fight against the lack of haemoglobin in the blood. The reason they implied that, this method is 100% side effect free and will help in other physiological and psychological disproportion amongst the people.

OBJECTIVE

The objective of the study was to find out the Effect of Pranayamas and Yogasanas on Haemoglobin Count of Middle Aged Females.

METHODOLOGY

Subjects: The subjects for this study were 40 in numbers, all female. All the subjects are the residents of barasat, north 24 pgs. The age of all the subjects were ranging between 35-42 years. For the purpose of the study, all the subjects were divided into two groups i.e experimental group and control group. In each group, there were equal numbers of subjects (20 experimental & 20 control). The subjects of experimental groups were given a systematic training programme of yogasanas and pranayamas for eight weeks by the experts in front of and under the supervision of the scholar, whereas the control group as leading their daily life as before without any special such treatments.

Variables: For the purpose of the study, asanas and the pranayamas were considered as the independent variables and haemoglobin count was considered as dependent variables. Some yogasanas selected for the study were- Mandukasan, Shashakasan, Bhujangasana, Shalabhaasan Uttanapadasana, Pavanmuktasan and Markatasana. Selected pranayamas like Ujjaie, Suryabhedna, Anuloma Viloma and Kapalbhathi were selected for the study.

Measures: Haemoglobin count was determined by the Blood Test with the help of the recognized standard medical laboratory.

Statistical Analysis: To find out the Effect of Pranayamas and Yogasanas on Haemoglobin Count of Middle Aged Females, Analysis of Covariance (ANCOVA) was used at .05 level of significance.

Findings

Table-1

Descriptive Statistics of Experimental Group and Control Group in relation to haemoglobin Count of Females.

Observation	Groups	N	Mean	Std. Deviation	Std. Error	Minimum	Maximum
Pre-Test	Experimental	20	10.92	1.032	.194	9.65	13.31
	Control	20	11.01	1.391	.253	8.95	13.62
	Total	40	10.95	1.163	.181	8.95	13.62
Post-Test	Experimental	20	11.54	.935	.113	10.25	13.98
	Control	20	11.04	1.029	.219	9.02	13.61
	Total	40	11.37	1.015	.172	9.02	13.98

Table-2

Adjusted Post Test Means of Experimental Group and Control Group in relation to haemoglobin Count of Females.

Groups	Ajdusted Means
Experimental	11.98
Control	11.24

Table-3
Analysis of Variance of Comparison of Means of Experimental Group and Control Group in relation to haemoglobin Count of Females.

		Sum of Squars	Df	Mean Square	F	Sig.
Pre-Test	Between Groups	9.154	1	9.154	5.870*	.019
	Within Groups	90.864	38	1.468		
Post-Test	Between Groups	10.576	1	10.576	9.691*	.003
	Within Groups	80.346	38	1.182		

* Significant at .05 level

Tab $F_{(.05)} 1,38 = 4.10$

In relation to pre test , Table-3, revealed that the tabulated “F” value was found to be significant at .05 level. In relation to post test , significant difference was observed among experimental and control group pertaining to Haemoglobin count of females.

Table-4
Analysis of Co-variance of comparison of adjusted post test means of Experimental Group and Control Group in relation to haemoglobin Count of Females

	Sum of Squars	Df	Mean square	F
Contrast	.844	1	.253	4.16*
Error	11.562	37	3.457	

Tab $F_{(.05)} 1,37 = 4.10$

* Significant at .05 level.

Table-4 revealed that calculated “F” value is higher than tabulated “F” value at .05 level of significance.

Discussions

The result of the present study which showed that there was a positive effect of Yogasanas and Pranayams on Haemoglobin count among middle aged Female, was similar to the study conducted by Raju, Prasad, Venkata, Murthy Reddy(1997)where there was a positive effect of intensive Yoga on Cardio respiratory efficiency. Another study conducted by Tokudome (2004), revealed that ther was positive effect of pranayama on marathon runner of Eastern Japan. Tran, Holly, Lashbrook and Amsterdam (2007) revealed that regular hatha yoga practice can elicit improvements in the health related aspects of physical fitness. Saxena And Saxena (2009) reported breathing exercise (pranayama), helped to improve lung related efficiency. Mcdonald, Dupree (2009) investigated the impact of japa, Yoga, Pranayama and Savasana on diagonastic physiological, haematological, biochemical and psychological parameters of human subjects in order to find out the possible remedial and preventive applications against certain diseases and psychometric disorders. Thus the result of the present study supports the outcome of other experimental studies which increase the authenticity of the present study.

Conclusion

On the basis of the revealed outcome of the present study, it clearly indicated that there was positive effect of various asanas and pranayamas on Haemoglobin count among female of middle age.

References

1. Bhandari, S (2000). Yoga-sutra of Patanjali. D.K Printworld (P) Ltd. New Delhi

2. Bowman. A J , Clayton, R.H Murray, A Reed J, W. Shubham, M.M.F & Ford, G.A (2003). European Journal of Clinical Investigation, 27(5) 443-449.

3. Bharadwaj Ishwar, Psychotherapy, Yoga and Traditional Therapies of East and West (New Delhi: Jagadamba Publishing Company, Feb 2004).

4. Chandrashekhar K., “Measurement & Evaluation in Physical Education”, New Delhi Khel Sahitya Kendra, 2006)

5. Clarke David H., “Exercise Physiology” (New Jersey, Practice hall, 1975).

6. Barnes, Davis, Murzynowski & Treiber, Psychosomatic Medicine, Vol 66, Nov-Dec 2004

7. Bernardi L, Passino C, Wilmerding V, Dallam GM, Parker DL, Robergs RA, Appenzeller O., “Breathing patterns and cardiovascular autonomic modulation during hypoxia induced by simulated altitude” J Hypertens. 2001 May; 19(5).

8. Bhargava R, Gogate MG, Mascarenhas JF, “Autonomic responses to prandharna and its effect on selected physiological variables”,

9. Brouna Luciem, ed. By Johnson warren R. and Buskirke E.R., “Science and Medicines of exercise and sports” (New York: Harper and Row Publishers, 1973).

10. Chaya MS, Kurpad AV, Nagendra HR, Nagarathna R., “The effect of long term combined yoga practice on the basal metabolic rate of healthy adults”, BMC Complement Altern Med. 2006 Aug 31.

11. Dane S, Cali kan E, Kara en M, Ozta an N., “Effects of prandharna on blood pressure and heart rate in right-handed healthy subjects”, Int J Neurosci. 2002 Jan; 112(1).

12. Danucalov MA, Simoes RS, Kozasa EH, Leite JR., “Cardio respiratory and metabolic changes during yoga sessions: the effects of respiratory exercises and meditation practices.” Appl Psychophysiol Biofeedback. 2008 Jun; 33(2) Epub 2008 Mar 4.

13. Holmes D.S., Solomon S., Effect of Transcendental Meditation versus resting on physiological and subjective arousal, Journal of Perspective Social Psychology, 1983 Jun; 44(6).