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Effect of Varied Combinations of Yogic Practices on Selected Physiological Variables of School Boys of Kuwait Ageing 13-15

T.Ramesh Kumar[1] & Dr.K.Chandrasekaran[2]

[1]*Ph.D., Research Scholar, Department of Physical Education, Karpagam University, Coimbatore, Tamilnadu, India.*
[2] *CHAIRPERSON, Professor & Head, Department of Physical Education, School of Education, Madurai Kamaraj University, Madurai-625021, India.*

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Abstract

The purpose of the study was to investigate the effect of varied combinations of yogic practices on physiological variables of school boys of Kuwait ageing 13-15. To achieve the purpose of this study a survey were conducted for 1000 students from Indian central school, Kuwait to find out the health related fitness status. Among the group 183 students were reported low fitness. In that forty male students who are low in fitness were selected for the experimental study. As per the records, their age ranged from 13 to 15 years. True randomized experimental group design has been employed with two groups, namely varied combinations of yogic practices group and control group with 20 students each. Resting heart rate, systolic blood pressure and diastolic blood pressure were the criterion variables for the present study. Group I underwent varied combinations of yogic practices viz, asanas, imaginary meditation followed by pranayama for a period of twelve weeks and no training were given to the control group. The two groups were statistically analysed by using analysis of covariance (ANCOVA). The result of the study reveals that there was a significant improvement in the experimental group on selected variables when compared to the control group after the completion of twelve weeks of varied combinations of yogic practices.

Keywords: Asanas, Imaginary Meditation, Pranayama, School Boys.

Introduction

Maharishi Patanjali, the father of modern concept of yoga and a great physician himself, in the 300 BC defined yoga as the complete mastery of mind and emotions. Unlike so many other philosophies of the world, it is a scientific philosophy that is wholly practical. Yoga is an exact science which has its foundation on certain immutable laws of nature and establishes mind over body. Yoga postures are the physical positions that co-ordinate breath with movement and with holding the position to stretch and strengthen different parts of body. Yogic postures systematically work on all the major muscle groups, including the back, neck, shoulders, deep abdominal, hip, ankles, feet, wrists and hands. By their very nature, yogic exercises affect all the muscles groups and organs as they simultaneously impart strength, increase flexibility and bring nourishment to internal organs. Although most poses are not aerobic in nature, they do in fact send oxygen to the cell by way of conscious deep breathing and sustained stretching and contraction of different muscle groups (Chandrasekaran, 1999).

The caloric requirement of yogic exercises is only 0.9 to 3 calories per minute depending upon the severity of exertion. Relaxation forms the most important aspect of yogic exercises unlike non-yogic exercises, during the practice of asana, muscles, which do not support weight or which are not actively involved are relaxed. With relaxation, the muscles return to normality after contraction and therefore yogic exercises keep the body more flexible. Non-yogic exercises improve the circulation of blood in voluntary system, thereby resulting in better muscular development as a result of improved function of the muscles. Yogic exercises aim at improving blood circulation to all the vital organs and thus improve their function (Iyengar, 1968).

Correspondence
Dr. K.Chandrasekaran
E-mail: chandruyoga@gmail.com, Ph. +9194435 74296

Methodology

The purpose of the study was to investigate the effect of varied combinations of yogic practices on physiological variables of school boys of Kuwait ageing 13-15. To achieve the purpose of this study a survey were conducted for 1000 students from Indian central school, Kuwait to find out the health related fitness status. Among the group 183 students were reported low fitness. In that forty male students who are low in fitness were selected for the experimental study. As per the records, their age ranged from 13 to 15 years. The investigator selected the following variables for the present investigation.

Table I. Criterion Measures

S.No	Variables	Test Items	Units
1	Resting heart rate	Stethoscope	Beats/Minute
2	Systolic blood pressure	Sphygmomanometer	mmhg
3	Diastolic blood pressure		

True randomized experimental group design has been employed with two groups, namely varied combinations of yogic practices group and control group with 20 students each. Group I underwent varied combinations of yogic practices viz, asanas, imaginary meditation followed by pranayama for a period of twelve weeks and no training were given to the control group. The two groups were statistically analysed by using analysis of covariance (ANCOVA).

Results

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

Table II. Summary of Descriptive Statistics on Physiological Variables of School Boys of Kuwait Ageing 13-15

S.No	Variables	VCYPG					CG				
		Pre	SD (±)	Post	SD (±)	Adjusted Mean	Pre	SD (±)	Post	SD (±)	Adjusted Mean
1	Resting Heart Rate	78.90	0.64	75.00	0.72	75.00	79.05	0.60	78.65	0.58	78.64
2	Systolic Blood Pressure	131.30	1.26	126.05	0.75	126.06	130.85	1.13	131.30	1.17	131.29
3	Diastolic Blood Pressure	86.30	1.03	83.65	0.67	83.64	86.60	0.75	86.10	1.02	86.10

VCYPG = Varied Combinations of Yogic Practices Group CG = Control Group

Table III. Analysis of Variance of Pre Test Scores on Physiological Variables of School Boys of Kuwait Ageing 13-15

Sl. No	Variables	Source of Variance	Sum of Squares	df	Mean Squares	F-Value
1	Resting heart rate	**BG**	0.22	1	0.22	0.58
		WG	14.75	38	0.38	
2	Systolic blood pressure	**BG**	2.02	1	2.02	1.40
		WG	54.75	38	1.44	
3	Diastolic blood pressure	**BG**	0.90	1	0.90	1.10
		WG	31.00	38	0.81	

***** P < 0.05 Table F, df (1,38) (0.05) = 4.09

In table III, the results of analysis of variance of pre test scores on resting heart rate (0.58), systolic blood pressure (1.40) and diastolic blood pressure (1.10) were lesser than the table value of 4.09 indicating that it was not significant for the degrees of freedom (1,38) at 0.05 level of confidence indicating that the random sampling was successful.

Table IV. Analysis of Variance of Post Test Scores on Physiological variables of school boys of Kuwait Ageing 13-15

Sl. No	Variables	Source of Variance	Sum of Squares	df	Mean Squares	F-Value
1	Resting heart rate	**BG**	133.22	1	133.22	305.89*
		WG	16.55	38	0.43	
2	Systolic blood pressure	**BG**	275.62	1	275.62	281.93*
		WG	37.15	38	0.97	
3	Diastolic blood pressure	**BG**	60.02	1	60.02	80.45*
		WG	28.35	38	0.74	

***** P < 0.05 Table F, df (1,38) (0.05) = 4.09

In table IV, the results of analysis of variance of post test scores on resting heart rate (305.89), systolic blood pressure (281.93) and diastolic blood pressure (80.45) were greater than the table value of 4.09 indicating that it was not significant for the degrees of freedom (1,38) at 0.05 level of confidence.

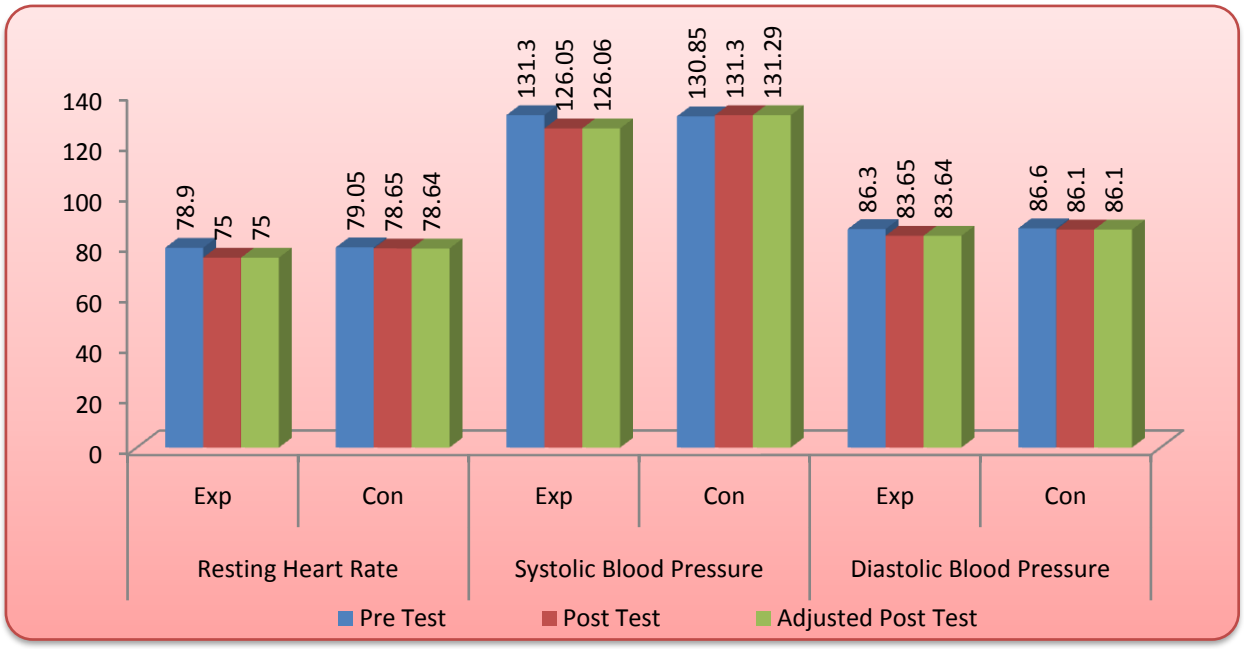
Table V. Analysis of Covariance of Adjusted post test scores on Physiological variables of school boys of Kuwait Ageing 13-15

Sl. No	Variables	Source of Variance	Sum of Squares	df	Mean Squares	F-Value
1	Resting heart rate	BG	130.96	1	130.96	292.94*
		WG	16.54	37	0.44	
2	Systolic blood pressure	BG	263.80	1	263.80	263.48*
		WG	37.04	37	1.00	
3	Diastolic blood pressure	BG	58.84	1	58.84	76.89*
		WG	28.31	37	0.76	

***** P < 0.05 Table F, df (1,37) (0.05) = 4.10

In table V, the results of analysis of covariance of adjusted post test scores resting heart rate (292.94), systolic blood pressure (263.48) and diastolic blood pressure (76.89), were greater than the table value of 4.10 indicating that it was not significant for the degrees of freedom (1,37) at 0.05 level of confidence.

Figure I. Shows the Mean Values of Yogic practices Group and control group on Physiological Variables of School Boys of Kuwait Ageing 13-15



Discussion on Findings

The prime intention of the researcher was to investigate the effect of varied combinations of yogic practices on physiological variables of school boys of Kuwait ageing 13-15. While analyzing results it was revealed that there was a significant differences found on experimental group. In the comparison of mean values of varied combinations of yogic practices and control groups, the mean differences on selected criterion measures namely resting heart rate, systolic blood pressure and diastolic blood pressure were found as statistically higher than the table value. In case of physiological variables i.e. resting heart rate, systolic blood pressure and diastolic blood pressure the results between pre and post (12 weeks) test has been found significantly higher in experimental group in comparison to control group. This is possible because still they are under process of physiological growth and development which directly contribute to enhancement in their total physiological variables and due to regular of yogic practices which may also bring sudden spurt in school boys. Hence the hypothesis earlier set that yogic practices programme would have been significant effect on physiological variables in light of the same the

hypothesis was accepted.

Conclusions

In the light of the study undertaken with certain limitations imposed by the experimental conditions, the following conclusion was drawn. The result of the study reveals that there was a significant improvement in the experimental group on selected variables when compared to the control group after the completion of twelve weeks of varied combinations of yogic practices.

References

1. Chandrasekaran, K. (1999). *Sound Health Through Yoga*. Tamil Nadu: Prem Kalyan Publications.
2. Iyengar, B.K.S. (1968). *Light on Yoga*. London: George Allen and Unwin Ltd.
3. Joshi.K (2001). *Yogic Pranayama*, New Delhi: Orient Paper Backs.
4. Nandi, S., Adhikari, H. & Bera, T.K. (2004). Effects of Aerobic exercise, Yogic Practice and the combination of both on Cardio respiratory endurance. *Yoga Mimamsa*, Vol.XXXV, No.3 and 4: 152-159.
5. Robert, K. W. (1970). Physiological Effects of Transcendental Meditation. *Science*, 167 :3926,1751-1754.
6. Sanford, I. N., Maxwell, V. R., David, A.F., Haaga., John, H., John, W. S., Fred, T., Melissa, T., Carolyn, G., Sarina, G. & Robert, H. S. (2009). A Randomized Controlled Trial on Effects of the Transcendental Meditation Program on Blood Pressure, Psychological Distress, and Coping in Young Adults. *American Journal of Hypertension*; 22:1326–1331.
7. Saravanan, J. & Kanagasabai P. (2010). Effects of selected yogic practices on selected physiological variables of college men. *Bharathiar National Journal of Physical Education and Exercise Sciences.* Vol.2, N0.2:30-34.
8. Saroja, M. (2012). Effects of Complex Training and the Combined Effects of Complex Training and Yogic Practices on Selected Physical and Physiological Variables among College Boys. *Yoga Mimamsa.* Vol.XLIV No.3:206-215.
9. Senthil Kumar. K (2013). Effect of physical combined physical cum yogic practices on selected physical, physiological, psychological and performance factors of kabaddi players. Unpublished Master's Thesis, Bharathidasan University, Tiruchirappalli.
10. Shenbagavalli, A. & Divya, K. (2010). The Effect of Specific Yogic Exercises and Combination of Specific Yogic Exercises with Autogenic Training on Selected Physiological, Psychological and Biochemical Variables of College Men Students. *Journal of Exercise Science and Physiotherapy*, Vol. 6, No. 2: 94-101.

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