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Effect of three different modes of yogic trainings on respiratory endurance

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Abstract

The present study has been designed to investigate the effects of different yogic training on the endurance of pre adolescence school boys. For accomplish the study total 100 school boys were selected randomly. Out of the total sample four groups were randomly assigned. The group one took part in yoga asana training, second group took part in pranayama training, and third group took part in combine mix training of yoga asana and pranayama and fourth group act as control group. The participant of control group did not perform any training. Each group consists of 25 subjects. The pre and post data were assessed before and after the training and analysis the obtained raw scores the analysis of covariance ANCOVA was used and level of significance was set at 0.05 respectively.

Keywords: Yoga asana, pranayama, endurance, pre-adolescent

Introduction

Yoga is become a powerful tool or method now days to be healthy and fit. The today's life style is entirely changed because we are depending on machines to do our simple work also. Most of the population in India is living a sedentary life style. They remove the hard physical work from their daily routine. Instead of hard work they attain much more mental pressure, stress or so on. Therefore, these problems can be solved with the help of yoga. Yoga should be the part of our daily routine exercise. Yoga is also useful in cardiovascular endurance. Aside from the physical benefits, one of the best benefits of yoga is how it helps a person manage stress, which is known to have devastating effects on the body and mind. "Stress can reveal itself in many ways, including back or neck pain, sleeping problems, headaches, drug abuse, and an inability to concentrate," says Dr. Nevins. "Yoga can be very effective in developing coping skills and reaching a more positive outlook on life."

Objectives of the Study

- To find out the effects of different trainings on the cardiovascular endurance of pre adolescence boys.

Hypothesis of the Study

- Different trainings have equal effects on cardiovascular endurance after covariate pretest.

Methodology and Procedure

Selection of the sample

A total 100 subjects were selected as sample for the present study. Before selection of the subjects medical history was examine by a medical expert to know whether the subjects were medically fit or not. After ensure their medical fitness the subjects were randomly selected from the school. The age of the sample were ranged from 14 to 18 years.

Selection of Variable

Dependent Variable: For assess the cardiovascular endurance of respondents 12 minute run and walk test was used. **Independent Variable:** The training of yoga asana, pranayama and mix training of yoga asana and pranayama was considered as independent variable for the present study.

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Statistical Method to be used

To find the effects of training and to identify the best training method in comparison to control group one way analysis of

covariance AVCOVA was used. The pretest was used as covariate for the dependent variable. The level of significance was set at 0.05 respectively.

Table 1: Analysis of Covariance for the Pre and Posttest data on Cardiovascular Endurance of Yoga Asana Group, Pranayama Group, Yoga Asana and Pranayama Group and Control Group

Test	Yoga Asana	Pranayama	Asana and Pranayama Mixed Group	Control Group	Source of Variance	(df)	Sum of square	Mean Squares	'F' Ratio
Pretest									
Mean	1852.80	1851.20	1977.60	1790.40	B.G.	3	463680	154560	3.52*
SD	233.80	236.29	192.64	167.14	W.G.	96	4213120	43886.66	
Posttest									
Mean	1929.60	1895.20	2079.20	1786.40	B.G.	3	1096844	365614.66	7.84*
SD	238.68	245.51	210.90	157.02	W.G.	96	4473280	46596.66	
Adjusted Posttest									
Mean	1944.93	1912.14	1968.65	1864.66	B.G.	3	140378.39	46792.79	23.72*
					W.G.	95	187368.27	1972.29	

*significance at 0.05 level

B.G. – Between Group, W.G – With in Groups (Endurance in meters)

Table value required for significance at 0.05 level with df 3 and 96 respectively.

Table 2: Post Hoc Test for the Difference between the Adjusted Posttest Paired Mean on Cardiovascular Endurance

Adjusted Posttest Mean					
Yoga Asana Group	Pranayama Group	Yoga Asana & Pranayama Group	Control Group	Mean Difference	Sig.
1944.93	1912.14	-	-	32.78	0.063
1944.93	-	1968.65	-	23.72	0.407
1944.93	-	-	1864.66	80.263	0.000
-	1912.14	1968.65	-	56.51	0.000
-	1912.14	-	1864.66	47.47	0.002
-	-	1968.65	1864.66	103.99	0.000

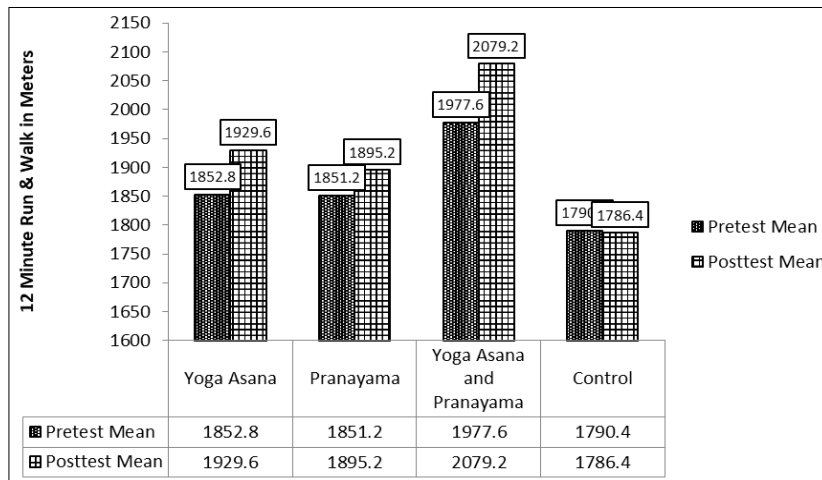


Fig 1: Mean Value of Yoga Asana, Pranayama, Yoga Asana and Pranayama and Control Groups on Cardiovascular Endurance

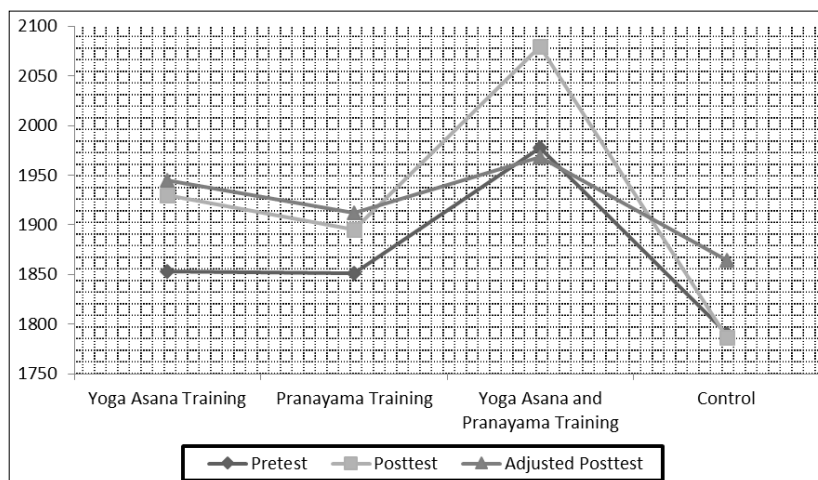


Fig 2: Adjusted Mean Value after covariate appearing in the modal (Pretest = 1868.00)

Results and Discussions

The table 1 illustrate the between subjects effects of the training among the groups in their pre and posttest measurement. There is slightly significant different were found between the mean score of pretest with F value of 3.52 respectively. The F value of posttest among the groups was 7.84 which were significant at 0.05 level of significant. Whereas the F value of adjusted mean is 23.72 which shows highly significant variation among the groups. Therefore, the hypothesis which was formulated earlier that “Different trainings have equal effects on cardiovascular endurance after covariate pretest” was rejected. To find out the mean difference post hoc test was administered in table 2 which reveals the mean difference in each group to find out the best training for cardiovascular endurance.

The table 2 reveals the pairwise mean comparison of different training groups with control group in their mean score of cardiovascular endurance. It was observed that highest mean difference (103.99) was observed between Pranayama and Yoga Asana combined training group (1968.65) and control group (1864.66). Therefore, it was concluded that combined training of yoga asana and pranayama has the highest effects on cardiovascular endurance of respondents.

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