

Effect of Cultural Asanas and Suryanamaskar on Selected Physiological Variables among Traffic Policemen

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Abstract

The study was conducted to evaluate the comparative effect of cultural asanas and suryanamaskar on selected psychological variable among traffic policemen. The area covered by the study came under the jurisdiction of the Chennai city. The subjects consisted of 45 male traffic constables (each group 15 samples) between the age group of 40-58yrs. The 6 week training program was conducted on 15 subjects at a time at Rajarathinam Stadium, Egmore, Chennai. Group I was assigned Cultural asanas, prescribed by B.K.S Iyengar. Group II was assigned Surya namaskar, prescribed by Swami Sathyananda Saraswathi. Group III was control group. Tadasana Pawan mukthasana Markatasana Ardha Uttanapadasana Uttanapadasana Halasana Sarvangasana Vakrasana Baddhakonasana Uppavishtakonasana Bhujangasana Ardhasalabhasana Salabhasana Surya Namaskar. Pranaamasana Hastauttanasana Padahastanasana Ashwasanchalasana Parvatasana Shashankasana Ashtangasana Bhujangasana Shashankasana Parvatasana Ashwasanchalasana Padahastanasana Hastauttanasana Pranaamasana. Reliable questionnaires were used to check the psychological variables job involvement and anxiety. The results showed significant strengthening of the psychological variables job involvement and anxiety. The study indicated the beneficial effects cultural asanas and suryanamaskar

Keywords: Cultural asanas, Suryanamaskar, Anxiety

Introduction

A person who has balance in enjoyments, movements, interactions, physical activities and sleep, gains mental composure by which he can overcome his mental disturbances. The word balance is used mean only need based. If all that man does is done according to needs, he enjoys doing them and he does them without carrying out to extremities then he is said to lead a life of yoga. This balance in life is a part of Meditation.

Purpose of the Study

The purpose of the study was to find out the effect of surya namaskar and cultural asanas on selected physiological variables among traffic policemen

Hypothesis

It was hypothesized that there would be significant differences on selected physiological variable Vital capacity, Heart rate.

Methodology

The area covered by the study came under the jurisdiction of the Chennai city. The subjects consisted of 45 male traffic constables (each group 15 samples) between the age group of 40-58yrs. The 6 week training program was conducted on 20 subjects at a time at Rajarathinam Stadium, Egmore, Chennai. Group I was assigned Cultural asanas. prescribed by B.K.S Iyengar

Group II was assigned Surya namaskar. prescribed by Swami Sathyananda Saraswathi Group III was control group. **Cultural Asanas.** Tadasana Pawan mukthasana Markatasana Ardha Uttanapadasana Uttanapadasana Halasana Sarvangasana Vakrasana Baddhakonasana Uppavishtakonasana Bhujangasana Ardhasalabhasana Salabhasana **Surya Namaskar.** Pranaamasana Hastauttanasana Padahastanasana Ashwasanchalasana Parvatasana Shashankasana Ashtangasana Bhujangasana Shashankasana Parvatasana Ashwasanchalasana Padahastanasana Hastauttanasana Pranaamasana..Stop watch was used to measure vital capacity and heart rate.

Statistical Technique

The Analysis of Covariance (ANCOVA) was used to find out the pre-test and post-test significance difference among the 3 groups. To find out the paired mean differences Scheff's Post Hoc test was used.

Results on Vital Capacity

The pre and post test scores of the physiological variable, vital capacity time was measured and subjected to statistical treatment. The results on the effect of six weeks training of Cultural asanas and Surya namaskar is presented in the table I

Table- I

**Computation of Analysis of Co- variance on Vital Capacity
(Scores in Seconds)**

Test	Cultural Asanas group	Suryana maskar group	Control Group	Source of variance	Sum of squares	Degrees of freedom	Means of Squares	Obtained F value
Pre Test	21.86	23.55	20.51	Between groups	69.61	2	34.806	1.81
				Within groups	809.53	42	19.27	
Post Test	24.073	24.273	20.46	Between groups	138.19	2	69.09	4.88
				Within groups	594.59	42	14.16	
Adjusted Post Test	24.15	23.18	21.47	Between groups	53.97	2	26.99	5.28
				Within groups	209.360	41	5.11	
Mean Gain	2.21	-0.72	0.15					

Table F ratio at 0.05 level of confidence for df 2 and 42 = 3.22, 2 and 41 = 3.23.

The table I shows that the pre test mean scores of vital capacity for Cultural Asanas group, Suryanamaskar group and control group were 21.86, 23.55, and 20.15 respectively and the obtained 'F' value on pre test scores 1.81 was less than the required F value of 3.22 to be significant at 0.05 level. This proved that there was no significant difference among the groups at initial stage and the randomized assignment of the subjects into three groups were successful.

Since significant improvements were recorded, the results were subjected to post hoc analysis using Scheffe's confidence interval test. The results were presented in table II

Table-II

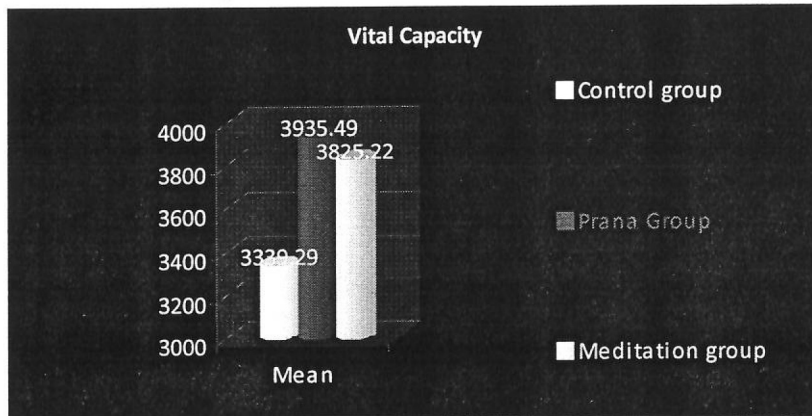
**Scheffe's confidence interval test scores on Vital Capacity
(Scores in seconds)**

Mean Values			Mean Diff	REQ C.I
Cultural asanas group	Suryanamaskar group	Control group		
24.15		21.47	2.68	2.05
	23.18	21.47	1.72	2.05
24.15	23.18		0.97	2.05

Discussions on the Findings of Vital Capacity

The multiple mean comparisons shown in Table II proved that there existed significant difference between the adjusted means of Cultural asanas group and control group, Suryanamaskar and control group, Cultural asanas, Suryanamaskar and control group. The result of this study on vital capacity is in line with the study conducted by Joshi (1996). The ordered adjusted means on vital capacity were presented through bar diagram for better understanding of the results of this study in

Figure-1
Bar Diagram Ordered Adjusted Means of Vital Capacity
(Scores in Seconds)



Results on Heart Rate

The pre and post test scores of the Physiological variable, heart rate was measured and subjected to statistical treatment. The results on the effect of six weeks training of Cultural asanas and Suryanamaskar is presented in the table III

Table-III
Computation of Analysis of Covariance on Heart Rate
(Scores in no of beats)

Source of variance	Sum of squares	Degrees of freedom	Means of Squares	Obtained F value
Source of variance		2	77.62	3.18
Between Groups		42	24.44	
Within Groups	581.11	2	290.56	15.05*
Between Groups	810.80	42	19.30	
Within Groups	833.58	2	416.79	34.84*
Between Groups	490.469	41	11.96	

Table F ratio at 0.05 level of confidence for df 2 and 42 = 3.22, 2 and 41 = 3.23.

From table III it is clear that obtained F-ratio 115.775 greater than the table value 3.22. Hence it was significant at 0.5 level of confidence for the degree of freedom 2 and 41.

Table-IV
Scheffe's Confidence Interval Test Scores on Heart Rate
(Scores in no of beats)

Mean Values			Mean Difference	REQ C.I
Cultural asanas group	Surya namaskar group	Control group		
72.22	75.83		3.608	1.766887
72.22		81.42	9.204	1.766887
	75.83	81.42	5.596	1.766887

Discussions on the Findings of Heart Rate

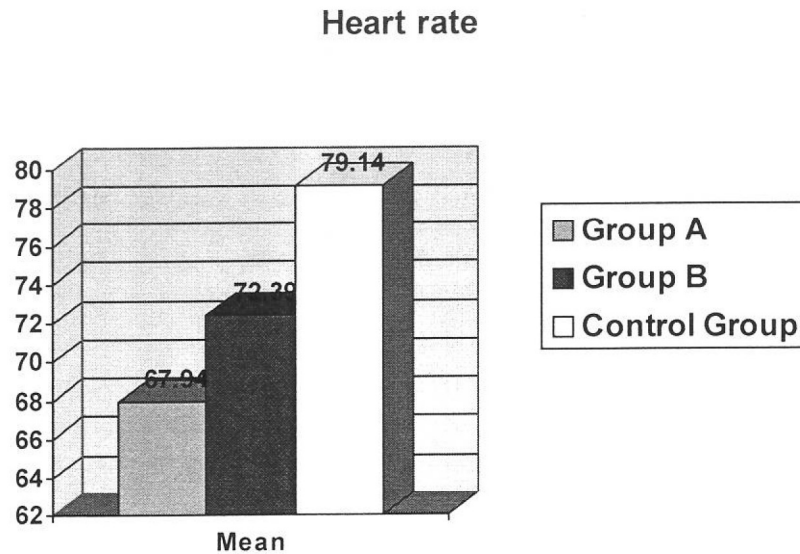
The table IV shows that Scheffe's confidence interval values of heart rate among cultural asana practice, suryanamaskar practice and control group.

From the table IV it is clear that the mean values of cultural asanas, suryanamaskar and control group were 72.22, 75.83 and 81.42 respectively.

The mean difference between cultural asanas group and control group, Suryanamaskar group and control group, cultural asana group Suryanamaskar group and control group were 3.608, 9.204 and 5.596. The required Scheffe's confidence interval to be significant at 0.05 level was 1.766887 and the difference between cultural asanas group, Suryanamaskar group and control group, Cultural asana group, where greater than required confidence interval and hence it is significant.

The ordered adjusted means on heart rate were presented through bar diagram for better understanding of the results of this study in figure - 2

Figure-2
Bar Diagram Ordered Adjusted Means of Heart Rate
(Scores in no of beats)



Discussions

(1) It was hypothesized that there would be significant difference between Cultural Asanas group, Suryanamaskar group and control group in physiological variable of vital capacity. According to Table II it was proved that there was significant difference between Cultural Asanas group, Suryanamaskar group and control group and hence the research hypothesis was accepted and null hypothesis rejected.

(2) It was hypothesized that group and there would be significant difference between Cultural Asanas group, Suryanamaskar group control group in physiological variable of Heart rate. According to Table IV it was proved that there was significant difference between Cultural Asanas group, Suryanamaskar group and control group and hence the research hypothesis was accepted and null hypothesis rejected.

Conclusions

Within the limitations and delimitations of the present study, the following conclusions were drawn after giving training in Cultural asanas and Surya namaskar for six weeks for two groups compared to control group.

- Heart Rate readings gradually tended towards normal.
- vital capacity showed considerable improvement.

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