

EFFECT OF YOGIC AND RECREATIONAL TRAINING ON AGILITY STRESS AND RESTING PULSE RATE AMONG INFORMATION TECHNOLOGY PROFESSIONALS

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ABSTRACT

The purpose of the present study was to find out the effect of yogic and recreational training on agility, stress and resting pulse rate among information technology professionals. To achieve the purpose of the study, the investigator selected 90 subjects. They were selected from the information technology professional, Chennai City, Tamil Nadu. Their age ranged between 25 and 30 years. The randomly assigned in to three groups namely Experimental group-I yogic training, Experimental group-II recreational training, and a Control Group (CG). Each group consists of 30 subjects. The following variables on namely agility stress and resting pulse rate were selected for the study. They were tested with Shuttle run, standardized Stress Questionnaire developed by Everyly and Girdano's and Digital Heart Rate Measuring Machine. The training period was six weeks. The Analysis of Covariance (ANACOVA) and post hoc test was used to assess the collected data. From the analysis of data it was proved that there was a significant reduction in the timing of agility, level of stress and resting pulse rate by both forms of experimental namely the yogic training and recreational training among information technology professionals.

KEYWORDS: Yogic Training, Recreational Training, Agility, Stress, Resting Pulse Rate and Information Technology Professional.

INTRODUCTION

The yoga is to devise ways and means of helping the body and mind to maintain their state of balance. Yoga helps one to achieve better emotional and intellectual concentration.

“Yoga is a system of integrate education of the body, the mind and the inner spirit. It is a way to attain salvation and to get oneself freed from the cycle of birth and death. It's main purpose is the elimination of the forces harmful to the soul. (Swami Vishnu Devananda, 1988)

Recreation is an essential part of human life and finds many different forms which are shaped naturally by individual interests but also by the surrounding social construction. Recreational activities can be communal or solitary, active or passive, outdoors or indoors, healthy or harmful, and useful for society or detrimental. A significant section of recreational activities are designated as hobbies which are activities done for pleasure on a regular basis. A list of typical activities could be almost endless including most human activities.

India's software exporting industry is one of the world's successful information technology industries. Begun in 1974, it employed 345,000 persons in 2004 and earned revenue of \$12.2 bn, equal to 3.3% of global software services spending. As we shall show, the industry originated under untypical conditions. Local markets were absent and government policy toward private enterprise was hostile. These conditions influenced the industry's origins. The industry was begun by Bombay-based conglomerates which entered the business by supplying global IT

firms located overseas with programmers. Their success owed to the innovative exploitation of a new global market opportunity and protection from transnational corporations and start ups by policy. The explanation on origins is the same as used to explain industry origin in countries such as Korea and Japan - with the difference that while government policy favoured large domestic firms and discouraged TNCs and small firms in those countries, in India, government policy disfavoured all types but was least hostile to large, domestic firms

Agility may be defined as the physical ability which enables an individual to rapidly change body position and direction in a precise manner.

It is the ability of the body or parts of the body to change direction rapidly and accurately. (Robert Hockey, 1996)

A nonspecific, often global response by an organism to real or imagined demands made on it: a person has to appraise a situation as stressful for it to be stressful. (Lester A. Lefton & Laura Valvatne, 1992).

The time from the end of one contraction to the end of the next contraction is a complete heart beat or pulse or cardiac cycle. The complete cardiac cycle takes less than one second (about 0.08 sec) in a normal adult at rest and it shortened by exercise.

STATEMENT OF THE PROBLEM

The purpose of the study was to find out effect of yogic and recreational training on agility stress and resting pulse rate among information technology professionals.

HYPOTHESES

It was hypothesized that there would be significant improvement on agility stress and resting pulse rate due to yogic and recreational training among information technology professionals.

REVIEW OF RELATED LITERATURE

Narayanakumar.P (2014). Conducted study on “Effect of Yoga and Physical Exercises on the selected Motor Ability Component variables of Hockey Players”. To achieve the purpose of study 90 men school students were selected as subjects, divided into three groups namely physical exercises programme, yogic exercises programme and control group, each group consist of 30 men school students, (Age 16 to 19 years). The following variable namely cardio respiratory endurance, flexibility and agility above selected variable were tested through standard test. The pre test were conduct before the experimental training. The experimental training were given to the experimental groups for the period of six weeks, the control group was not exposed to any experimental training. The post test conducted at the end experimental period. The Analysis of covariance (ANCOVA), Scheffe's post hoc test were used. The result of the study shows that there was a significance exist between physical exercise group and yoga training group on cardio respiratory endurance, flexibility and agility when compared to the control group.

Pradeep.C.S, Ajeesh.P.T and Arun.C.Nair. (2012) conducted study on “Impact of Selected Minor Games on Physiological Factors and Relationship between Obesity; Among School Students”. To achieve the purpose of study 230 School Students were selected from the subjects and impact of minor games group was 230 participants, (Age 10 to 17 years). The following Body Mass Index (BMI), BMI percentile, percent body fat, waist circumference and heart rate variables were tested through standard test. The pre test were conduct before the experimental training. The experimental training were given to the experimental groups for the

period of eight weeks, Analysis of covariance (ANOVA) were used. The result of the study shows that there was minor game programme resulted in reducing overweight and obesity rates in Kerala school children. This study is the first to examine the effects of minor game on overweight and obesity rates in Kerala school children.

METHODOLOGY

The purpose of the present study was find out the effect of yogic and recreational training on agility stress and resting pulse rate among information technology professionals. To achieve the purpose of the study, the investigator selected 90 subjects. They were selected from the information technology professional, Chennai City, Tamil Nadu. Their age ranged between 25 and 30 years. The randomly assigned in to three groups namely Experimental group-I yogic training, Experimental group-II recreational training, and a Control Group (CG). Each group consists of 30 subjects. The following variables on namely agility stress and resting pulse rate were selected for the study. They were tested with Shuttle run, standardized Stress Questionnaire developed by Everyly and Girdano's and Digital Heart Rate Measuring Machine. The training period was six weeks. The Analysis of Covariance (ANACOVA) and post hoc test was used to assess the collected data.

TABLE - I
YOGIC TRAINING SCHEDULE

Day	Yogic Training	Duration
Monday	Loosening exercises, Yogic Training and relaxation	Loosening exercises – 5 minutes. Yogic Training – 35 minutes. Relaxation – 5 minutes.
Tuesday	Loosening exercises, Yogic Training and relaxation	Loosening exercises – 5 minutes. Yogic Training – 35 minutes. Relaxation – 5 minutes.
Wednesday	Loosening exercises, Yogic Training and relaxation	Loosening exercises – 5 minutes. Yogic Training – 35 minutes. Relaxation – 5 minutes.
Thursday	Loosening exercises, Yogic Training and relaxation	Loosening exercises – 5 minutes. Yogic Training – 35 minutes. Relaxation – 5 minutes.
Friday	Loosening exercises, Yogic Training and relaxation	Loosening exercises – 5 minutes. Yogic Training – 35 minutes. Relaxation – 5 minutes.

TABLE - II
RECREATIONAL TRAINING SCHEDULE

Day	Yogic Recreational	Duration
Monday	Warm up, Stretching Recreational Training and cool down	Warm up and stretching – 5 minutes. Recreational Training – 35 minutes. Cool down – 5 minutes.
Tuesday	Warm up, Stretching, Recreational Training and cool down	Warm up and stretching – 5 minutes. Recreational Training – 35 minutes. Cool down - 5 minutes.
Wednesday	Warm up, Stretching, Recreational Training and cool down	Warm up and stretching – 5 minutes. Recreational Training – 35 minutes. Cool down - 5 minutes.
Thursday	Warm up, Stretching, Recreational Training and cool down	Warm up and stretching – 5 minutes. Recreational Training – 35 minutes. Cool down - 5 minutes.
Friday	Warm up, Stretching, Recreational Training and cool down	Warm up and stretching – 5 minutes. Recreational Training – 35 minutes. Cool down - 5 minutes.

RESULTS AND DISCUSSION

TABLE III
COMPUTATION OF ANALYSIS OF COVARIANCE ON AGILITY STRESS AND RESTING PULSE RATE

Test	Mean			SV	Sum of Squares	df	Mean Squares	Obtained F
	Experimental Group - I	Experimental Group - II	Control Group					
Variable : Agility								
Pre test	16.64	16.51	16.98	bet	3.53	2	1.76	1.30
				with	117.79	87	1.35	
Post test	15.02	15.26	16.90	bet	62.71	2	31.35	21.53 *
				with	126.72	87	1.46	
Adjusted	15.08	15.44	16.66	bet	40.26	2	20.13	49.70 *
				with	34.83	86	0.41	
Mean gain	1.62	1.25	0.08					
Variable : Stress								
Pre test	26.23	26.30	27.60	bet	35.62	2	17.81	1.10
				with	1414.87	8	16.26	
Post test	23.53	22.50	27.43	bet	406.16	2	203.08	14.41 *
				with	1226.33	8	14.10	

Adjusted	23.94	22.85	26.68	bet	229.55	2	114.77	44.43*
				with	222.15	8	2.58	
Mean gain	2.70	3.80	0.17					
Variable : Resting Pulse Rate								
Pre test	74.20	74.30	72.87	bet	38.42	2	19.21	1.22
				with	1374.57	8	15.80	
Post test	69.13	70.23	72.30	bet	155.09	2	77.54	5.25*
				with	1285.13	8	14.77	
Adjusted	68.78	69.80	73.09	bet	296.71	2	148.35	45.81*
				with	278.50	8	3.24	
Mean gain	5.07	4.07	0.57					

Table F – ratio at 0.05 level confidence for 3 and 87(df) = 3.10, 3 and 86 (df) = 3.10

*Significant

The pre test scores of experimental group I, experimental group II and control group on agility were 5.16, 6.4, 16.51 and 16.98, stress were 26.23, 26.30 and 27.60 and resting pulse rate were 74.20, 74.30 and 72.87 respectively. The post test scores of experimental group I, experimental group II and control group on agility were 15.02, 15.26 and 16.90, stress were 23.53, 22.50 and 27.43 and resting pulse rate were 69.13, 70.23 and 72.30 respectively. The ordered adjusted mean scores of experimental group I, experimental group II and control group on agility were 15.08, 15.44 and 16.66, stress were 23.94, 22.85 and 26.68 and resting pulse rate were 68.78, 69.80 and 73.09 respectively. The mean gain in the experimental group I, experimental group II and control group on agility were 1.62, 1.25 and 0.08, stress were 2.70, 3.80 and 0.17 and resting pulse rate were 5.07, 4.07 and 0.57 respectively.

The obtained F value on pre test scores 1.30, 1.10 and 1.22 was less than the required F value of 3.10 to be significant at 0.05 level. This proved that there were no significant difference between the experimental and control groups indicating that the process of randomization of the groups was perfect while assigning the subjects to groups. The post test scores analysis proved that there were significant differences between groups, as the obtained F value 21.53, 14.41 and 5.25 was greater than the required F value of 3.10. This proved that the differences between the post test means of the subjects were significant. Taking into consideration the pre and post test scores among the both experimental groups, adjusted mean scores were calculated and subjected to statistical treatment. The obtained F value of 49.70, 44.43 and 45.81 was greater than the required F value 3.10. This proved that there was a significant difference among the means due to the experimental training on agility, stress and resting pulse rate.

TABLE IV
SCHEFFE'S POST HOC TEST ON AGILITY, STRESS AND RESTING PULSE RATE

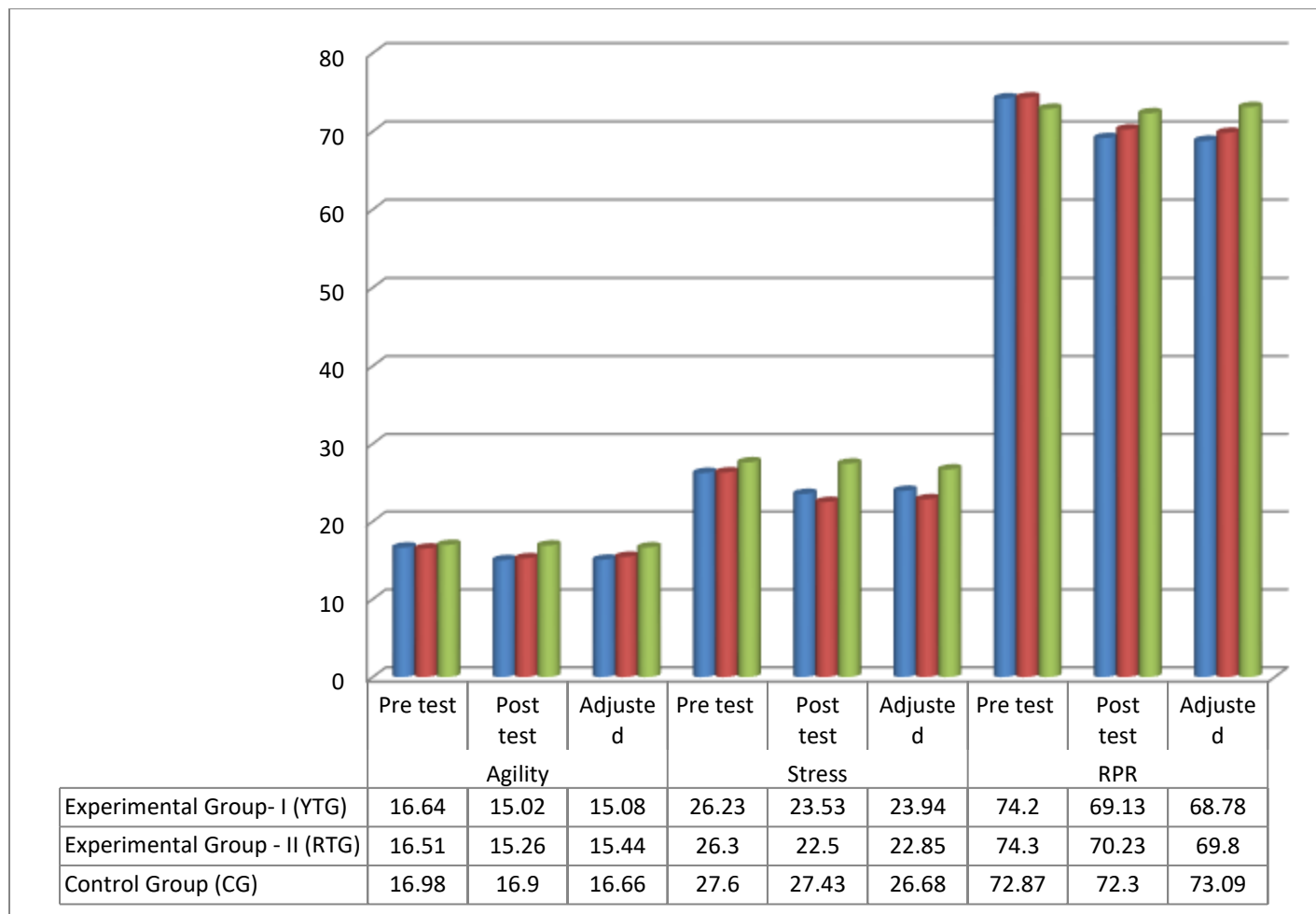
Experimental Group- I (ETDNCWDRG)	Experimental Group - II (ETDNCWDRG)	Control Group (CG)	MD	CI
Variable :Agility				
15.08	15.44	-	0.36	0.41
15.08	-	16.66	1.58*	
	15.44	16.66	1.22*	
Variable :Stress				
23.94	22.85	-	1.09*	1.03
23.94	-	26.68	2.75*	
	22.85	26.68	3.84*	
Variable :Resting Pulse Rate				
68.78	69.80	-	1.01	1.16
68.78	-	73.09	4.31*	
	69.80	73.09	3.29*	

*Significant

The agility multiple mean comparison showed in Table IV proved that there was significant differences exists between the adjusted means of Yogic training group and control group, Recreational training group and control group as the mean difference were greater than the obtained confidence interval 0.41. There was no significant difference between Yogic training group and Recreational training group as the mean difference was lesser than the obtained confidence interval 0.41. The resting pulse rate multiple mean comparison showed in Table IV proved that there was significant differences exists between the adjusted means of Yogic training group and control group, Recreational training group and control group as the mean difference were greater than the obtained confidence interval 1.16. There was no significant difference between Yogic training group and Recreational training group as the mean difference was lesser than the obtained confidence interval 1.16.

The stress multiple mean comparison showed in Table IV proved that there was significant differences exists between the adjusted means of Yogic training group and Recreational training group, Yogic training group and control group, Recreational training group and control group as the mean difference were greater than the obtained confidence interval 1.03. Comparing the means of the two experimental groups, experimental group –II (Recreational training group) found better in improving (reducing) stress than the experimental group –I (Yogic training group).

FIGURE 1
BAR DIAGRAM ON ADJUSTED MEANS OF AGILITY, STRESS AND RESTING
PULSE RATE



CONCLUSION

1. The timing of agility was significantly improved by the both forms of experimental groups namely the yogic training group and recreational training group among information technology professionals.
2. The level of stress and resting pulse rate were significantly reduced by the both forms of experimental groups namely the yogic training group and recreational training group among information technology professionals.

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