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Effect of yogic practices on selected physiological and psychological variables among middle aged stressed women

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Abstract

For the present investigation middle aged stressed women were selected randomly from Tirunelveli. Totally Twelve weeks training were given of Suryanamaskar, Asanas with Meditation practices & Suryanamaskar, Asanas with Meditation practices to the subjects.

All the subjects were assigned to two experimental group 'I' and 'II', one control group 'III' each group consists of 15 subjects. Following Suryanamaskar, Asanas with Meditation practices and Suryanamaskar, Asanas with Meditation practices were given to Group 'I' and 'II'. No training was provided to group 'III'

Experimental Group 'I' - (Suryanamaskar, Asanas with Meditation practices)
Experimental Group 'II' - (Suryanamaskar, Asanas with Meditation practices)
Group 'III' - (Control group, No training was provided)

Keywords: Yogic practices, physical fitness physiological, psychological

Introduction

Yoga is one of the six orthodox systems of Indian philosophy. Yoga is the union of the jivatma with the Paramathma. It was collated, coordinated and systematized by Patanjali in his classical work, the Yoga Sutras, which consists of 195 terse aphorisms in which it is stated that yoga is a state where all activities of the mind are channelized in one direction; or the mind is free from distractions. The word Yoga is derived from the Sanskrit root Yuj meaning to bind, to unite, join, and attach and yoke, to direct and concentrate one's attention on, to use and apply. It also means union or communion. It means the disciplining of the mind, intellect, the emotions, the will, which that yoga presupposes; it means a poise of the soul which enables one to look at life in all its aspects evenly.

Physiological

- Immunity increases
- Energy level increases
- Breath holding time increases
- Excretory functions improves
- Blood pressure decreases and the like

Psychological

- Attention improves
- Memory improves
- Anxiety and depression decreases
- Wellbeing increases
- Self-actualization increases
- Self-acceptance increases
- Somatic and kinesthetic awareness increases
- Social adjustment increases
- Social skills improves

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Vital capacity

It is the maximum amount of air that can be exhaled after a maximum inhalation (usually tested with a Spiro meter used to determine the condition of lung functioning) It is the Maximal volume of the air forcefully expired after maximal inhalation. It is an important consideration for people with high-level asthma who also have impaired pulmonary function.

Stress

Stress is defined in terms of tolerance, stressful environment which are those that are outside the normal tolerance limit of daily function at extreme level; stimulation might be perceived as pain”.

Statement of the problem

The purpose of the study is to find out the “Effect of yogic practices on selected physiological and psychological variables among middle aged stressed women.”

Hypothesis

It was hypothesized that there would be significant improvement on the selected Physiological, Psychological variables among middle aged stressed women due to different packages namely Vivekananda school yoga and Shri B. K. S Iyengar method of yogic practices than control group.

It was hypothesized that there would be significant changes on the improvement of selected Physiological, Psychological variables due to different packages namely Vivekananda school yoga and Shri B. K. S. Iyengar method of yogic practices

Review of related literatures

Panjwani, U., *et al* (1995) studied the Effect of Sahaja yoga practice on stress management in patients of epilepsy. The study was carried out on 32 patients of epilepsy who were randomly divided into 3 groups: group I subjects practiced Sahaja yoga meditation for 6 months, group II subjects practiced postural exercises mimicking Sahaja yoga and group III served as the epileptic control group. Galvanic skin resistance (GSR), blood lactate and urinary vinyl mandelic acid (U-VMA) were recorded at 0, 3 and 6 months. There were significant changes at 3 & 6 months as compared to 0 month values in GSR, blood lactate and U-VMA levels in group I subjects, but not in group II and group III subjects. The results indicate that reduction in stress following Sahaja yoga practice is responsible for clinical improvement.

DiBenedetto M, *et al* (2000) examined if a tailored yoga program could improve age-related changes in hip extension, stride length, and associated indices of gait function in healthy elders, changes that have been linked to increased risk for falls, dependency, and mortality in geriatric populations. A 3-dimensional quantitative gait evaluation, including kinetic measurements, was performed pre- and post-intervention.

Twenty-three healthy adults (age range, 62-83y) who were naive to yoga were recruited; 19 participants completed the program. An 8-week Iyengar Hatha yoga program specifically tailored to elderly persons and designed to improve lower-body strength and flexibility. Participants attended two 90-minute yoga classes per week, and were asked to complete at least 20 minutes of directed home practice on alternate days. Findings of this exploratory study suggest that yoga practice may improve hip extension, increase stride length, and decrease anterior pelvic tilt in healthy elders, and that yoga programs tailored to elderly adults may offer a cost-effective means of preventing or reducing age-related changes in these indices of gait function.

Methodology

Selection of subjects

In this study, the subjects were selected on the basis of the prevalence of stress. 30 men were provided with the stress questionnaire developed by Dr. Latha Satish (1997) and the filled up questionnaires were analysed and the stress levels were determined. Out of these middle aged stressed women the rese Tirunelveli archer selected 30 subjects by random sampling method from. The main criterion of selection of the subjects was the prevalence of stress and their willingness to participate and complete the training programme, so that the results would be reliable. The student’s age ranged from 25 to 35 years.

Physiological variables

Vital capacity

Psychological variables

Stress

Experimental design

The subjects formed three groups:

1. Subjects were trained on Vivekananda School of yoga method.
2. 10 subjects were trained on B.K.S. Iyengar style. (The above two groups formed the Experimental groups).
3. 10 subjects formed the Control group.

Pretest measurements of selected physiological and psychological variables were recorded carefully. Then the experimental procedures were explained to them in detail. The yogic practices was given to two groups which formed the experimental groups and the other group was the control group which was not exposed to any yogic practices. After 6 weeks post-test measurements on the same parameters were recorded to find out the effect of different packages of yoga on selected physiological and psychological variables on Middle aged stressed women.

Results and Discussions

Table 1: Analysis of co-variance of the means of two experiment group and the control group in vital capacity

MEANS	EXP I	EXP II	CONTROL	S.V	SS	DF	MS	F
PRE TEST	237.000	235.000	230.000	A	260	2	130	0.329268
				W	10660	27	394.8148	
POST TEST	333.000	311.000	229.000	A	60080.00	2	30040	51.36669
				W	15790.00	27	584.8148	
ADJESTED	329.92	309.97	233.11	A	51031.31	2	25515.66	145.3996
POST TEST				W	4562.645	26	175.4864	

*Table value 3.38, Significant at 0.05 level

From Table-I it is very clear that obtained F-ratio 145.39 greater than the table value 3.38. Hence it was significant at

0.05 level of confidence for the degree of freedom 2 and 26.

Table 2: Scheffe’s post-hoc test for vital capacity

Yogic practices (group-1)	Yogic practices (group-II)	Control group (Group-III)	Mean difference	C.I
329.92	309.97	-	19.94	17.19
329.92	-	233.11	96.81	
-	309.97	233.11	76.86	

Discussions on the findings of vital capacity

The Table-I shows that Scheffe’s confidence interval values of Vital capacity among experimental group 1 & experimental group 2 and control group (Group 3) of men with stress.

From the Table-II it is clear that the mean value of experimental group 1 & experimental group 2 and control group (Group 3) of men with stress were 329.92, 309.97 and 233.11 respectively.

The mean difference between, experimental group 1 & experimental group 2, and control group (Group 3) were 19.94, 96.81 and 76.86 respectively. The required Scheffe’s confidence interval to be significant at 0.05 level was 17.19. Hence there was significant difference between experimental group 1 and experimental group 2 and significant difference was found between experimental groups and control group.

The obtained mean values in pretest and post-test of experimental group 1, experimental group 2 and control group are represented through bar diagram for better understanding.

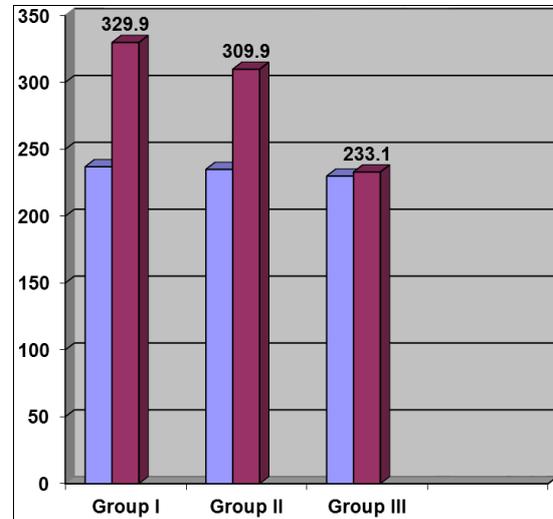


Fig 1: Bar diagram showing the mean difference among experimental group 1 & 2 and control group on vital capacity

Table 3: Analysis of co-variance of the means of two experimental groups and the control group in stress

Means	Exp I	EXP II	Control	S.V	SS	DF	MS	F
PRE TEST	28.200	28.300	25.300	A	58.06667	2	29.03333	1.539216
				W	91.8	27	3.4	
POST TEST	22.900	24.700	25.900	A	45.60	2	22.8	7.516484
				W	81.90	27	3.033333	
ADJUSTED	22.16	23.89	27.45	A	95.86704	2	47.93352	50.25244
POST TEST				W	24.80022	26	0.953855	

*Table value 3.18, Significant at 0.05 level.

From Table-III it is very clear that obtained F-ratio 50.25 greater than the table value 3.38. Hence it was significant at

0.05 level of confidence for the degree of freedom 2 and 26.

Table 4: Scheffe’s post-hoc test for stress

Experimental group-1	Experimental group-II	Control group-III	Mean difference	Required C.I
22.16	23.89	-	1.73	1.13
22.16	-	27.45	5.29	
-	23.89	27.45	3.56	

Discussions on the finding of stress

The Table-III shows that Scheffe’s confidence interval values of Stress among Yogic practices (Group 1 & 2) and Control group (Group 3) of middle aged stressed women.

From the Table- IV it is clear that the mean value of experimental group 1 & experimental group 2 and Control group (Group 3) of middle aged stressed women were 22.16, 23.89 and 27.45 respectively.

The mean difference between, experimental group 1 &

experimental group 2 and control group (Group 3) were 1.73, 5.29 and 3.56 respectively. The required Scheffe’s confidence interval to be significant at 0.05 level was 1.13. Hence there was significant difference between experimental group 1 and experimental group 2 and significant difference was found between experimental groups and control group.

The obtained mean values in pretest and post-test of experimental group 1, experimental group 2 and control group are represented through bar diagram for better understanding.

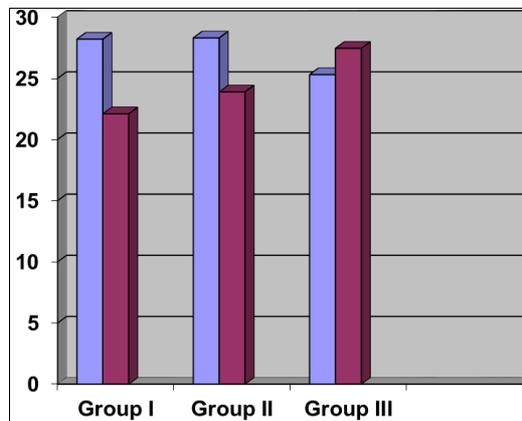


Fig 2: Bar diagram showing the mean difference among experimental group 1& 2 and control group on stress

Discussion on hypothesis

For the purpose of the study it was hypothesized that the experimental group 1 and experimental group 2 would show significant improvement on the selected Physiological, and Psychological variables among middle aged stressed women better than the control group.

The results presented in Tables I to IV and the bar diagram proved that there was a significant difference due to six weeks sithili karana vyayama, suryanamaskar, asanas, pranayama, and relaxation practices on Psychological variables like Stress, Physiological variables like Vital Capacity. Thus, the hypothesis was accepted at 0.05 level.

It was also hypothesized that the changes on the improvement of selected Physiological and Psychological variables as a result of sithili karana vyayama, suryanamaskar, asanas, pranayama, and relaxation practices would differ significantly.

The post hoc analysis of the results proved that experimental group I comprising of sithili karana vyayama, suryanamaskar, asanas, pranayama, and relaxation practices was better than experimental group II in Vital capacity and stress. The experimental group II comprising of suryanamaskar, asanas, pranayama, and relaxation practices showed better results than group I in resting pulse rate, and anger among the stressed men and hence the hypothesis was accepted to this extent.

Conclusions

Within the limitations of the present study, the following conclusions were drawn:

1. Vital Capacity showed significant improvement due to the influence of the six weeks of yogic practices of the experimental group I and experimental group II than the control group and particularly better improvement is evident in the experimental group I.
2. The stress levels showed significant improvement due to the influence of the six weeks of yogic practices of the experimental group I and experimental group II than the control group and particularly better improvement is evident in the experimental group I.

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