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Effect of yogic practices on selected physiological and psychological variables among female geriatric people

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Abstract

The purpose of the present study was to find out the effect of yogic practices on selected physiological and psychological variables among female geriatric people. The study was conducted on 40 geriatric people in totally two groups, namely, control & experimental group. Experimental group consisted of 15 geriatric people. They underwent eight weeks practice in Pavanamuktasana series, Asana, Pranayama, Meditation and Relaxation whereas the control group did not undergo any type of training. Physiological and psychological variables were measured before and after the experimentation using the standardized tests and standard/modified questionnaires. Analysis of Covariance (ANCOVA) analyzed the data and it was concluded that the Pavanamuktasana series, Asana, Pranayama, Meditation and Relaxation had significant of ($P < 0.05$) effect on physiological and psychological variables among geriatric people.

Keywords: Geriatric, Pavanamuktasana series, Asana, pranayama, meditation and relaxation, physiological and psychological variables

Introduction

Health is the level of functional or metabolic efficiency of a living organism. In humans, it is the ability of individuals or communities to adapt and self-manage when facing physical, mental or social challenges. The World Health Organization (WHO) defined health in its broader sense in its 1948 constitution as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity. This definition has been subject to controversy, in particular as lacking operational value and because of the problem created by use of the word "complete" Other definitions have been proposed, among which a recent definition that correlates health and personal satisfaction. Classification systems such as the WHO Family of International Classifications, including the International Classification of Functioning, Disability and Health (ICF) and the International Classification of Diseases (ICD), are commonly used to define and measure the components of health. Swami Vivekananda in his immortal speech said Indian philosophy will be accepted around the world by one and all Krishnacharya and Swami Sivananda Saraswati have proved swami Vivekananda words true by spreading yoga to all nations of the world. In Present day yoga is respected around the world and accepted as a life style practice. Researcher's a carried art it the Past have proved beyond doubt that yoga has improved not only the physical body but also the mind. The subtle anatomy of the humans is divided into five energetic sheaths known as 'pancha kosha'. Pancha, meaning five and kosha, meaning layer or sheath. This ideology describes the human being "as multi-dimensional, with the source or foundation in a spiritual dimension." The so-called 'spiritual dimension' is pure consciousness which is hidden by the other four koshas, the outermost layer being the most dense, physical body. Each kosha can be thought of as energy vibrating at a different frequency. The physical body therefore vibrates at the slowest rate and the 'inner light of consciousness' or 'atman' vibrates at fastest rate or frequency. Although all five layers interpenetrate one another.

Yoga is the science of right living and, as such, is intended to be incorporated in daily life. It works on all aspects of the person: the physical' vital, mental, emotional, psychic and spiritual. The word *yoga* means 'unity' or 'oneness' and is derived from the Sanskrit work *yuj*, which means 'to join'.

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This unity or joining is described in spiritual terms as the union of the individual consciousness with the universal consciousness. On a more practical level, yoga is a means of balancing and harmonizing the body, mind and emotions. Pranayama is an excellent means of dealing with tensions. By exercising and strengthening the lungs, rebalancing the autonomic nervous system, and strengthening the entire nervous system, it diminishes the possibility of a future asthma attack. Essentially pranayama is designed to allow us to master the body's energy systems. The practices lead to increased self-confidence and mastery of mind. Through greater control of prana, we gain greater control over ourselves. Kriya means action. Shat kriya consists of six groups of purification practices. These process intent to purify the body from its impurities and the three dhosas or humors in the body (i.e. –phlegm, wind and bile), and balance them to help the free flow of prana.

Statement of the Problem

The purpose of the study was to find out the effect of Yogic practices on selected physiological and psychological variables among geriatric people.

Review of Related Literature

Maxwell *et al.*, 2007^[7] Results of meta-analyses showed that simple biofeedback, relaxation-assisted biofeedback, progressive muscle relaxation, and stress management training did not show statistically significant reductions in elevated BP. Analysis of trials of the Transcendental Meditation program showed clinically and statistically significant changes in BP (-5.0/-2.8 mm Hg). Other published research on the Transcendental Meditation program suggest complementary effects on other CVD risk factors, disease markers, and clinical events for reducing psychosocial stress, smoking, alcohol abuse, myocardial ischemia, carotid atherosclerosis, and mortality rates. Thus, there is sufficient evidence that, among stress reduction programs, the Transcendental Meditation program is effective and warrants recommendation to patients with elevated blood pressure in preventing or treating hypertension and CVD.

Uppal, (1990)^[15] conducted a study to determine the effects of interval training and two continuous load methods on cardio respiratory and selected physiological parameters. One group was given show continuous running for a period of ten weeks, five days in a week. The load was increased progressively after every 10 days he found that (1) all the three group had equal training effects on maximal oxygen uptake, vital capacity, leg length, positive breath holding and negative systolic blood pressure (2) slow the continuous and fartlek method result significantly in this improvements in cardio respiratory endurance when compared to interval training (3) slow continuous running and interval training were superior to farlek in reducing the resting pulse rate.

Methodology

The purpose of the study was to find out the effect of yogic practices on selected physiological and psychological variables among female geriatric people. For the purpose of

this study, forty female geriatric people were chosen on random basis from Chennai only. Their age group ranges from 50 to 60.

The subjects were divided into two group of forty. The experimental group would undergo yogic practices and the second group consider as control group not attend any practices, and the pre test and posttests would be conducted before and after the training. Training would be given for eight weeks. It would be found out finally the effect of yogic practices on selected physiological and psychological variables among female geriatric people in scientific method. The collected data were statistically analyzed by using analysis of covariance (ANCOVA).

Training Schedule

Experimental Group: Yogic practices

Training Programme:

1. Pavanamuktasana series
2. Suryanamaskar (Bihar School of Yoga) - 12 counts

Asana

1. Pranamasana	Normal
2. Hasta Uttanasana	Inhale
3. Padahastasana	Exhale
4. Ashwa Sanchalanasana	Inhale
5. Parvatasana	Exhale
6. Ashtanga Namaskara	Holding
7. Bhujangasana	Inhale
8. Parvatasana	Exhale
9. Ashwa Sanchalanasana	Inhale
10. Padahastasana	Exhale
11. Hasta Uttanasana	Inhale
12. Pranamasana	Normal

Breathing

Yogasanas

1. Padmasana, Vajrasana, Paschimottanasana
2. Tadasana, Trikonasana, Padahastasana, Ardha Chakrasana
3. Salabhasana, Bhujangasana, Dhanurasana
4. Viparitarani, Sarvangasana, Halasana, Uttanapadasana
5. Savasana (Relaxation)

Pranayama

1. Anulom, Vilom
2. Nadi Shodhana
3. Sitali
4. Sitkari
5. Bhastrika

Meditation

Relaxation

Group II: Control Group (No Training).

Results and Discussions

The statistical analysis comparing initial and final means of pulse rate due to yogic practices among female geriatrics people is presented in Table I.

Table I: Computation of Mean and Analysis of Covariance of Pulse Rate of Experimental and Control Group (Scores in beats/minute)

Test	Experimental group	Control group	Source of Variance	Sum of square	Df	Mean Squares	Obtained F
Pre-test mean	80.25	80.85	Between	3.60	1	3.60	0.69
			Within	198.30	38	5.22	
Post-test mean	75.10	80.25	Between	265.23	1	265.23	50.51*
			Within	199.55	38	5.25	
Adjusted mean	75.16	80.19	Between	249.22	1	249.22	47.89*
			Within	192.55	37	5.20	

*significant.

Table value for df 1 and 38 was 3.21 Table value for df 1 and 37 was 3.22.

The obtained adjusted mean values were presented through bar diagram in figure 1.

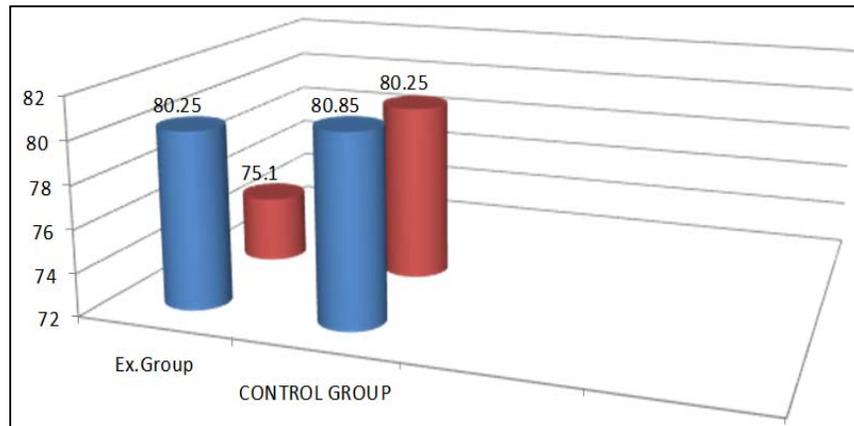


Fig 1: Bar Diagram on Ordered Pre and Post Means pf Pulse Rate

Discussions on the Findings of Physiological Variables

Taking into consideration of the pre test means and post test means adjusted post test means were determined and analysis of covariance was done and the obtained F value 47.89 was greater than the required value of 3.22 and hence it was accepted that the yogic practices significantly

improved (decreased) the resting pulse rate of the geriatric peoples.

The statistical analysis comparing initial and final means of stress due to yogic practices among female geriatrics people is presented in Table II.

Table II: Computation of Mean and Analysis of Covariance of Stress of Experimental and Control Group (Scores in marks)

Test	Experimental group	Control group	Source of variance	Sum of square	Df	Mean Squares	Obtained F
Pre-test mean	109.90	107.10	Between	78.40	1	78.40	0.57
			Within	5211.60	38	137.15	
Post-test mean	71.90	103.85	Between	10208.03	1	10208.03	61.90*
			Within	6266.35	38	164.90	
Adjusted mean	71.12	104.63	Between	11056.22	1	11056.22	87.61*
			Within	4669.18	37	126.19	

*significant.

Table value for df 1 and 38 was 3.21 Table value for df 1 and 37 was 3.22.

The obtained adjusted mean values were presented through bar diagram in figure 2.

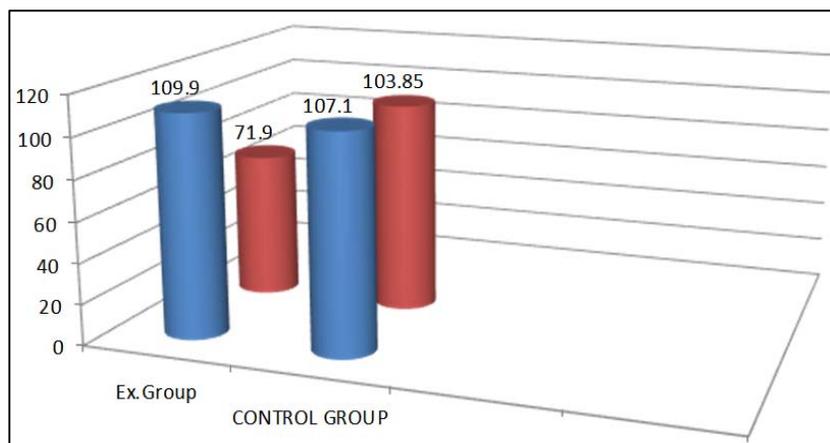


Fig 2: Bar Diagram on Ordered Pre and Post Means of Stress

Discussions on the Findings of Psychological Variables

Taking into consideration of the pre test means and post test means adjusted post test means were determined and analysis of covariance was done and the obtained F value 87.61 was greater than the required value of 3.22 and hence it was accepted that the yogic practices significantly improved (decreased) the stress of the geriatric peoples.

Conclusion of the Research

The analysis of co-variance of Resting pulse rate and stress indicated that experimental group (yogic practices) and group II (Control group), were significantly improved the Resting pulse rate and stress. It may be due to the effect of Yogic Practices.

The findings of the study showed that the experimental group I (Yogic Practices) had improvement (Decreased) Resting pulse rate and stress more than the experimental group I (Yogic Practices) Nearly everything in life requires balance. Yogic Practices on its own is a good step toward a healthy life style. However, as individual, it is important to malaise that we need to work on our body as well as our mind. We can use Yogic Practices not only as part of a program to improve (Decreased) Resting pulse rate and stress, but also as a way to assist in attaining other goals.

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