International Journal of Advanced Research and Development
ISSN: 2455-4030, Impact Factor: RJIF 5.24
www.advancedjournal.com
Volume 1; Issue 9; September 2016; Page No. 33-35

An exploratory study of low back pain among yoga practitioners and non-yoga practitioners in relation to specific life style factors

[1] Engersol, [2] Dr. V Duraisami

[1] Ph.D. Scholar, Department of Physical Education & Yoga, Karpagam University, Coimbatore, Tamil Nadu, India
[2] Asst. Professor, Dept. of Yoga, Tamilnadu Physical Education & Sports University, Chennai, Tamil; Nadu, India

Abstract
The purpose of the study was to investigate an exploratory study of low back pain among yoga practitioners and non yoga practitioners in relation to specific life style factors. The subjects were equally assigned to random sampling procedure into two equal groups, i.e., the experimental group and control group. The experimental group under gone the practices in yogic practices. The control group not underwent the any kind of yogic practices for the duration of the training programme of twelve weeks. The training was given in alternate days in a week. Each session scheduled for 60 minutes. The anger and heart rate was measured before and after the experimentation using the standardized test and standardized questionnaire. The data were analyzed by Analysis of Covariance (ANCOVA) and it was concluded that the selected yogic practices group than the control group had significant ($P < 0.05$) effect on the anger and heart rate level.

Keywords: Yogic practices, anger and heart rate, low back pain

1. Introduction

Modern Yoga is said to have begun the Parliament of Religions in Chicago, 1893. During this meeting the young Swami Vivekananda from India made a deep impression on the American he introduced to Yoga. Vivekananda became whom of the most popular members of the Parliament, and he subsequently toured the US giving lectures on Yoga. Many Yoga masters would later cross the ocean and follow in his footsteps, spreading Yoga to all corners of the continent. Yoga schools where founded and increasing numbers of people fell in love with the yogic forms of exercise. Many masters also went to Europe where the reception, for some reason, wasn't quite as warm.

Yoga, in the form of Hatha Yoga, debuted in the consciousness's of the American masses when Russian born Indra Devi, of the called "the first lady of Yoga", opened a Yoga studio in Hollywood in 1947. She taught movie starts like Gloria Swanson, Jennifer Jones and Robert Ryan, as well as educating hundreds of Yoga teachers.

On an interesting side note, Dalai lama is a great yogi from Tibet, representing Buddhism and Tibetan Yoga. He was awarded the Nobel price for peace and has inspired many westerners to learn more about Buddhism and Yoga.

It was not until the discovery of the Indus- valley civilization, the largest civilization that knowledge about the origin of Yoga surfaced. Excavations give evidence of yoga's existence during this period; yogi -like figures engraved on soapstone seals have been unearthed. In fact, it was the Aryans, migrating from the north- west, who were instrumental in discovering yoga.

According to Patanjali, one can attain this (the individual self with the Supreme One) union by controlling and eliminating the ever- arising 'vrittis' or modifications of the mind. He also suggests that the mind, in turn, can be controlled through the right kind of discipline and training. Patanjali says that there are basic obstacles pervading the mind that are not conducive to yoga practice.

He divides these obstacles into two groups:

1. Antarayas (intruders in the path of yoga).
2. Viksepasahabhuvah (co-existing with mental distraction)

There are nine Antarayas.

1. Vyadhi (physical disease)
2. Styana (mental laziness)
3. Samsaya (doubt)
4. Pramada (heedlessness)
5. Alasya (physical laziness)
6. Avirati (detachment)
7. Bhrantidarsana (false perception)
8. Alabdha- bhumikatva (non-attainment of yogic states)
9. Anavasthitatva (falling away from yogic states attained)

The above obstacles blocks the flow of prana (life force) in Astral body (koshas and chakras) leads to ATHI.

This ATHI (stress) spread from one place to and occupy the entire body known as Vyathi (diseases). If stress occurs in the Astral body (sukshuma sarira) it reflects in the physical body (sthoola sarira). So as the result the entire body became prey to deadly diseases and disorder.

2. Aim of the Study

The aim and objective of the study was to investigate an exploratory study of low back pain among yoga practitioners and non yoga practitioners in relation to specific life style factors.

3. Methods and Materials

The sample for the present study consists of 40 low back pain sufferers from Chennai city. The subjects were selected using random sampling method. Their age ranged from 30 - 40 years. They were divided into two group's namely experimental group and control group (n=40), and The Clinical Anger Scale**:** Construct Measurement, Reliability, and Validity: William E. Snell, Jr., Scott Gum, Roger L. Shuck, Jo A. Mosley, and Tamara L. Hite. Southeast Missouri State University, and heart rate measurement was administrated by stop watch and stethoscope equipment. Experimental group was under the practice of yogic practices for the period of 12 weeks both morning at 6.30 to 8.00 for the period of 12 weeks. The training programme was administered for 60 to 90 minutes per session. The control group did not engage in any special activities. The load was fixed based on the pilot study. The pre test and post test were taken before and after the experimental training programme. Analysis of covariance was used as a test of significance.

Experimental Group: Yogic Practices

Yogic Practices (group-I)	
▪ Loosening exercises:	
▪ Asanas:	
1.	*Ardhakati chakrasana*
2.	*Ardhachakraasana*
3.	*Parivartha trikonaasana*
4.	*Bhujangaasana*
5.	*Salabhaasana*
6.	*Vakrasana*
7.	*Ustraasana*
▪ Relaxation:	
▪ Meditation	
- Pain Management	
Meditation	

Group II: Control Group (No Practice)

4. Results

The data pertaining to the variables under the study was examined by analysis of covariance for each criterion variables separately in order to determine the differences, if any between the groups at different stages.

Table I: Analysis of Covariance for Pre and Post Tests Data on Anger of Yogic Practices Group and Control Group.

	Yogic Practices Group	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtained F
Pre Test Mean	38.80	37.10	Between	28.90	1	28.90	0.21
			Within	5285.00	38	139.08	
Post Test Mean	28.20	40.80	Between	1587.60	1	1587.60	23.40*
			Within	2578.40	38	67.85	
Adjusted Mean	27.81	41.19	Between	1778.40	1	1778.40	44.21*
			Within	1488.34	37	40.23	
Mean Diff	-10.60	3.70					

*significant.

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

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

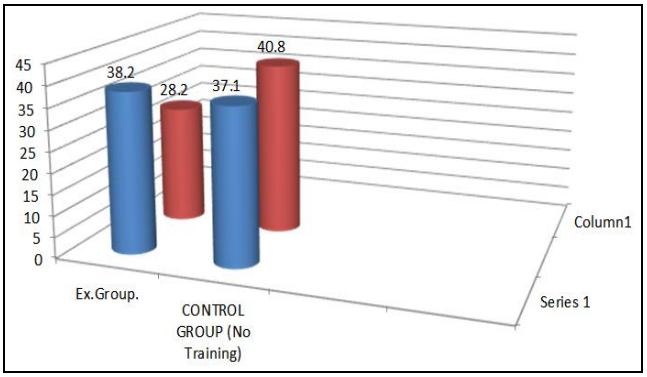

Fig 1: Bar Diagram on Ordered Pre and Post Means of Anger

5. Discussions on the Findings of Anger

Taking into consideration of the pretest means and posttest means adjusted posttest means were determined and analysis of covariance was done and the obtained F value 44.21 was greater than the required value of 3.22. And hence it was accepted that the Yogic practices significantly improved (decreased) the anger level of the yoga practitioners.

The post hoc analysis of obtained ordered adjusted means proved that there was significant differences existed between Yogic practices group and control group on pain level. This proved that due to 12 weeks of Yogic practices in anger level was significantly improved (decreased) among yoga practitioners.

Table II: Analysis of Covariance for Pre and Post Tests Data on Heart Rate of Yogic Practices Group and Control Group.

	Yogic Practices Group	Control	Source Of Variance	Sum Of Squares	Df	Mean Squares	Obtained F
Pre Test Mean	80.90	80.40	Between	2.50	1	2.50	0.35
			Within	270.60	38	7.12	
Post Test Mean	75.80	80.65	Between	235.23	1	235.23	19.11*
			Within	467.75	38	12.31	
Adjusted Mean	75.66	80.79	Between	260.36	1	260.36	25.00*
			Within	385.27	37	10.41	
Mean Diff	5.10	0.25					

*significant.

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

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

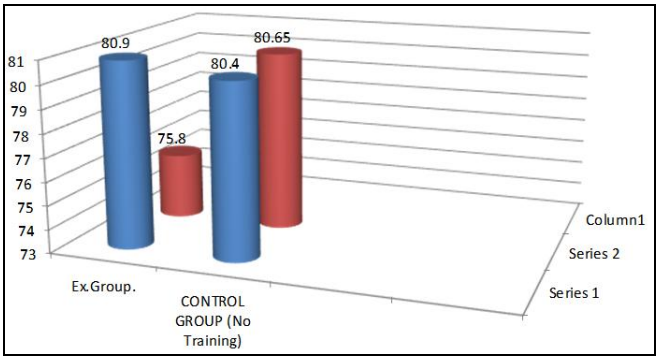

Fig 2: Bar Diagram on Ordered Pre and Post Means of Heart Rate

6. Discussions on the Findings of Heart Rate

Taking into consideration of the pretest means and posttest means adjusted posttest means were determined and analysis of covariance was done and the obtained F value 25.00 was greater than the required value of 3.22. And hence it was accepted that the Yogic practices significantly improved (decreased) the heart rate level of the yoga practitioners.

The post hoc analysis of obtained ordered adjusted means proved that there was significant differences existed between Yogic practices group and control group on heart rate level. This proved that due to 12 weeks of Yogic practices of heart rate level was significantly improved (decreased) among yoga practitioners.

7. Conclusion of the Research

The analysis of co-variance of anger and heart rate level indicated that experimental group I (yogic practices), and group II (Control group), were significantly improved (decreased) the anger and heart rate level. It may be due to the effect of Yogic practices.

The analysis of co-variance of anger and heart rate indicated that experimental group I (yogic practices) and group II (Control group), significantly improved (decreased) the anger and heart rate level. It may be due to the effect of Yogic practices.

The findings of the study showed that the experimental group I (Suryanamaskar) had improvement Flexibility 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 improved (decreased) the anger and heart rate level, but also as a way to assist in attaining other goals.

8. Reference

1. Yoga Mimamsa, quarterly Journal Vol.xxiv kaivalyadhama, lonavala, 1985.
2. Dr. Suthakar S, Dr. Sundar Raj Urs DP Shivakumar. Effect of selected yogic exercises on selected physiological variable of secondary school children, International Journal of Physical Education, Sports and Health, 2016; 3(4):114-116.
3. Dr. Sundar Raj Urs DP Shivakumar, Dr. Suthakar S. Effect of Selected Yogic Exercises on Cardiovascular Endurance and Lung Capacity of Secondary School Children. 2016; 6(6):7286-7289. IJESC.
4. Strukic PJ. Basic Physiology, New York: Spring Ervellong Inc. 1981, 23.
5. Swami Kuvalayananada. Asana, (India: Lonavala: Kaivalyathama). 1977.
6. Suthakar S, Dr. Pushparajan A. Effects of Silambam and Karate with Yogic Training on Agility and Arm Explosive Power of Collegiate Male Students international journal of innovative research and development. 2014; 3(4). ISSN 2278-0211.