



An Exploratory Study of Low Back Pain among Yoga Practitioners and Non Yoga Practitioners in Relation to Specific Life Style Factors

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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.

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Introduction

“Salutations to the glorious (original) guru, Sri Adinath, who instructed the knowledge of hatha yoga which shines forth as a stairway for those who wish to ascend to the highest stage of yoga, raja yoga.”

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 were 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 consciousnesses 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 stars like Gloria Swanson, Jennifer Jones and Robert Ryan, as well as educating hundreds of Yoga teachers.

During the 1950s one of the foremost Yoga teachers of his time, Selvarajan Yesudian, wrote the book "Sport and Yoga", and it was through this book Yoga

entered the world of sports. This book has been translated into more than fourteen languages and has sold more than half a million copies. Today we can observe many athletes and sports teams that have incorporated Yoga in their injury reducing, strengthening and focus oriented training regimens. One of the most well known examples are the NBA stars of the Chicago Bulls. 1961 Hatha Yoga was presented in American television by Richard Hittleman, and his book called The Twenty Eight day Yoga Plan sold in the millions. In the middle of the 60s, Yoga got a real promotional boost when the Yogi Maharishi Mahesh taught Yoga to the famous pop-stars in the Beatles. Many other artists and musicians were influenced to take up Yoga as well. During the 60s and 70s Yoga became a way of life for many people living on the American west coast.

On an interesting side note, Dalai lama is a great yogi from Tibet, representing Buddhism and Tibetan Yoga. He was awarded the Nobel prize for peace and has inspired many westerners to learn more about Buddhism and Yoga. Yoga - the very word radiates peace and tranquility. This feeling probably stems from the etymology of the word. The word Yoga is derived from the Sanskrit word 'Yuj' which essentially means "to join or unite". The union referred to is that of the individual self uniting with Cosmic Consciousness or the Universal Spirit. Yoga is a means to achieving this goal. Born in India, almost 26,000 years ago, Yoga is believed to have evolved during the period of the 'Sat Yuga', also called the Golden age. This period became known as a time of everlasting peace and abundant blessings, filled with seekers of the Eternal Truth. That

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is why, probably, even today we associate yoga with sages and hermits.

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. Yogic exercises recharge the body with cosmic energy. This facilitates

1. Attainment of perfect equilibrium and harmony
2. Promotes self- healing.
3. Removes negative blocks from the mind and toxins from the body
4. Enhances Personal power
5. Increases self-awareness
6. Helps in attention focus and concentration, especially important for children
7. Reduces stress and tension in the physical body by activating the parasympathetic nervous system.

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. 1.Vyadhi (physical disease)
2. 2.Styana (mental laziness)
3. 3.Samsaya (doubt)
4. 4.Pramada (heedlessness)
5. 5.Alasya (physical laziness)
6. 6.Avirati (detachment)
7. 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.

Methodology

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. 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 groups 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 administered 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.

Group I: Experimental Group: Yogic Practices

- 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)

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.

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.

Figure I. Bar diagram on ordered pre and post means of anger

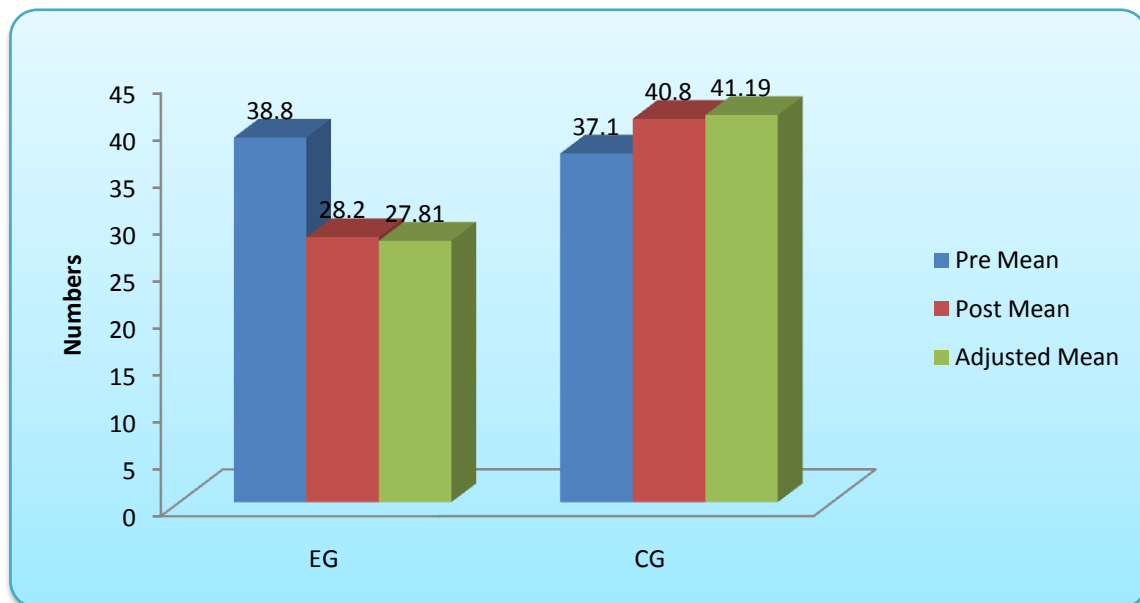


Table II. Analysis of covariance for pre and post tests data on heart rate of yogic practices group and control group

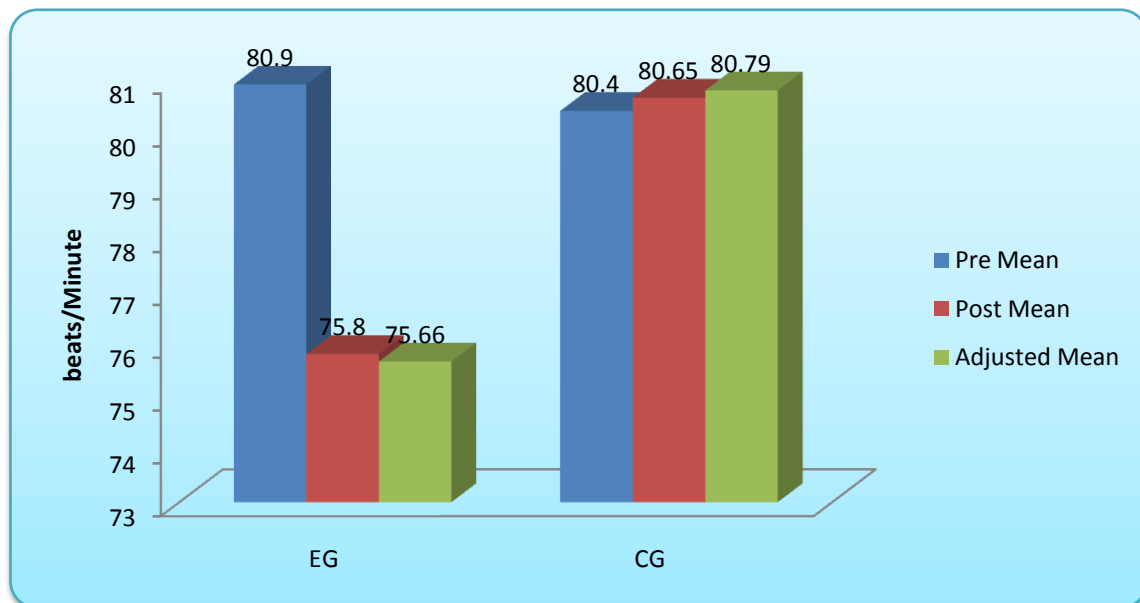
| | Yogic practices group | control | source of variance | sum of squares | df | mean squares | obtained f |
|-----------------------|-----------------------|---------|--------------------|----------------|----|--------------|------------|
| Pre Test Mean | 80.90 | 80.40 | Between | 2.50 | 1 | 2.50 | 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.

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.

Figure I. Bar diagram on ordered pre and post means of anger



Conclusion

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.

Reference

1. Swami Satyananda saraswathi (2007). “Meditation from the Tantras”, Bihar; Yoga Publication Trust Munger Bihar.P-108-111.
2. Chandrasekar.K (2003) “Yoga for Health” Delhi; Khel Sathiyakendra Delhi,
3. Swami Satyananda Saraswathi, (2005). Four chapters of freedom” Bihar; Yoga publication trust Munger, Bihar.P-108.
4. Prakash Tiwari.O.M. (2005) “Asana- Why and How”, Pune; Kaivalyadhama, SMYM Samiti.P-32, 66.
5. Gharote, M.L. “Asanas-a Perspective”, Yoga Mimamsa, Vol.xxv kaivalyadhama, 1985.
6. Yoga Mimamsa, quarterly Journal Vol.xxiv kaivalyadhama, lonavala, 1985.
7. Dr. S Suthakar and Dr. Sundar Raj Urs DP Shivakumar (2016), Effect of selected yogic exercises on selected physiological variable of secondary school children, International Journal of Physical Education, Sports and Health, 3,4- 114-116.
8. Dr. Sundar Raj Urs D.P. Shivakumar , Dr. S. Suthakar, (2016), Effect of Selected Yogic Exercises on Cardiovascular Endurance and Lung Capacity of Secondary School Children, 6,6 PP. 7286-7289, IJESC.
9. Strukic, P.J, (1981). Basic Physiology, New York: Spring Ervellong Inc., P.23.
10. Swami Kunalayananda, (1977), Asana, (India: Lonavala: Kaivalyathama)
11. Swamy Satyanand Saraswati, (1996). Asana Pranayama Mudra Bandha, (Bihar, India: Bihar School of Yoga, Yoga Publications Trust, pp. 9 – 12.
12. Shri Yardi M.R : The yoga of patanjali Bhandarkar oriental research institute, Poona, India L 1979.
13. S. Suthakar, Dr. A. Pushparajan 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. Volume 3, Issue 4, April 2014; ISSN 2278 – 0211.
14. Thirumalaisamy.R, “Statistics in physical education” Karaikudi: senthil publication, 1988: p.58. Shirley Telles,et.al, 1994) short communication autonomic changes during "om" meditation Vivekananda Kendra Yoga Research Foundation, Bangalore, India.