



## 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 pain and depression 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 pain and depression level.

**Keywords:** Yogic practices, pain and depression and low back pain.

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### Introduction

“Sama dosha samagnisca sama dhatu mala kriyaha” The person who always eats wholesome food, enjoys a regular lifestyle, remains unattached to the objects of the senses, gives and forgives, loves truth, and serves others, is without disease. The total of body, mind and spirit. It includes physical health, mental health, emotional health, and social health, suthakar(2016), It is a well-known fact that India is, next only to China, the second largest country in terms of population in the world. But the health status of a great majority of the people is far from satisfactory as compared to China and other developed countries. However, over the last five decades or so, India has built up health infrastructure and manpower at primary, secondary and tertiary care in government, voluntary and private sectors and made considerable progress in improving the health of its population (Ray 2003; Bhat and Babu 2004).

However, India is one of the major countries where communicable Diseases are still not under control. The incidence of new fatal diseases such as AIDS / HIV, hepatitis-A is on the increase and tuberculosis and malaria still take a high toll. Chronic non-communicable diseases such as heart diseases, diabetes and cancer are also in the rise (Bhat and Babu 2004). Health risk due to high prevalence of alcohol and Tobacco consumption is also increasing, India’s dream of “World Class” health care

delivery system is difficult to achieve. *Pancha Kosha - the Subtle Energy Body or 'Five Sheaths'* 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.

These five sheaths can be divided into three bodies:  
**Sthula Sharira / Physical Body** - Annamayakosha  
**Sukshma Shariria / Astral Body** - Pranamayakosha, Manomayakosha, Vijnanamayakosha  
**Karana Shariria / Causal Body** - Vijnanamayakosha, Anandamayakosha

Of all these, the anandamayakosha is not bound by time or space and does not die. When the practitioner resides in this sheath, they have remembered or realized their true nature, reached enlightenment and health will pervade on all layers. 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

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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.

### 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 Goldberg Depression Questionnaire designed by Ivan Goldberg (1993) and pain measurement scale was administrated to them. 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. The test was conducted Goldberg Depression Questionnaire designed by Ivan Goldberg (1993) and pain measurement scale was administrated on each end of the cessations and data was recorded. 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. Parivarthar 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 pain of yogic practices group and control group

	YOGIC PRACTICES GROUP	CONTROL	SOURCE OF VARIANCE	SUM OF SQUARES	df	MEAN SQUARES	OBTAINED F
<b>Pre Test Mean</b>	7.15	6.90	Between	0.63	1	0.63	0.44
			Within	54.35	38	1.43	
<b>Post Test Mean</b>	4.85	7.40	Between	65.03	1	65.03	37.81*
			Within	65.35	38	1.72	
<b>Adjusted Mean</b>	4.75	7.50	Between	74.71	1	74.71	89.36*
			Within	30.93	37	0.84	
<b>Mean Diff</b>	2.30	0.50					

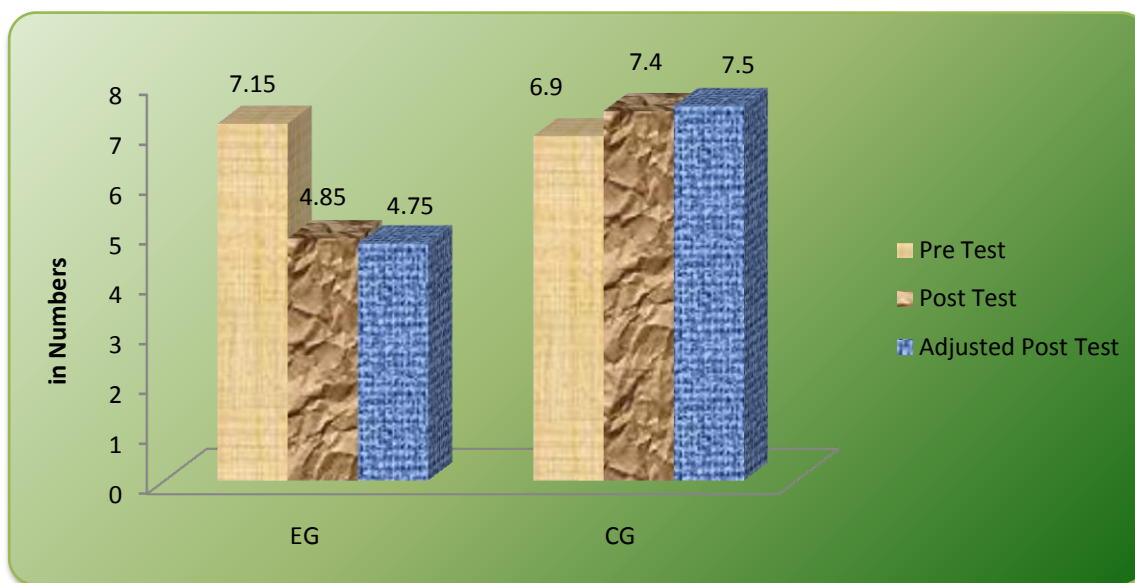
\*significant.

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

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 89.36 was greater than the required value of 3.22. And hence it was accepted that the Yogic practices significantly improved (decreased) the pain 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 pain level was significantly improved (decreased) among yoga practitioners.

**Figure I.** Bar diagram on means of pain



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

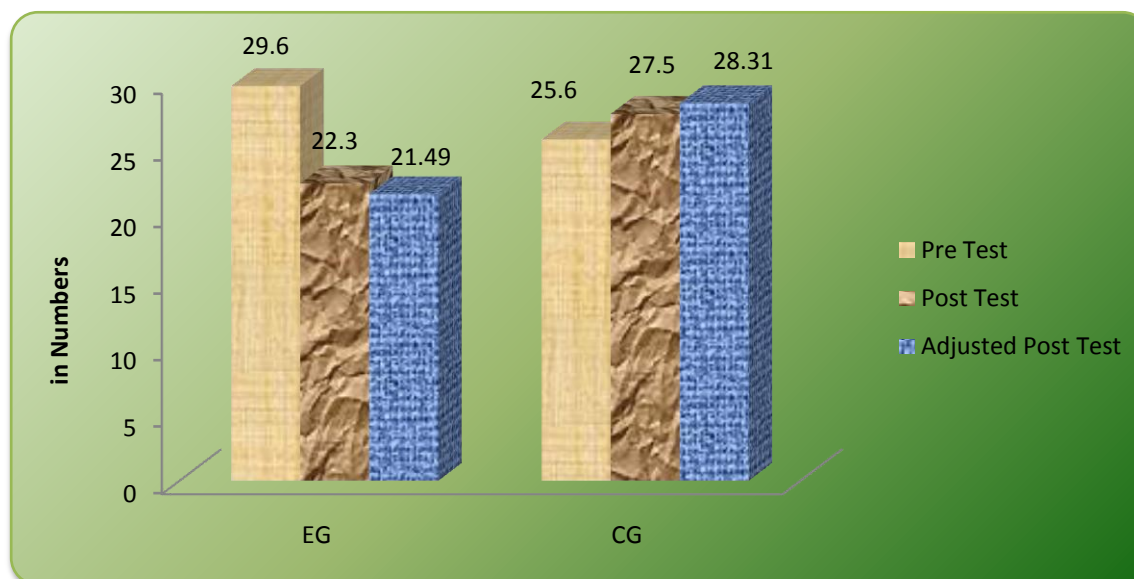
	YOGIC PRACTICES GROUP	CONTROL	SOURCE OF VARIANCE	SUM OF SQUARES	df	MEAN SQUARES	OBTAINED F
<b>Pre Test Mean</b>	29.60	25.60	Between	160.00	1	160.00	2.35
			Within	2591.60	38	68.20	
<b>Post Test Mean</b>	22.30	27.50	Between	270.40	1	270.40	6.94*
			Within	1481.20	38	38.98	
<b>Adjusted Mean</b>	21.49	28.31	Between	438.44	1	438.44	15.38*
			Within	1054.65	37	28.50	
<b>Mean Diff</b>	7.30	1.90					

\*significant.

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

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 15.38 was greater than the required value of 3.22. And hence it was accepted that the Yogic practices significantly improved (decreased) the depression 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 of depression level was significantly improved (decreased) among yoga practitioners.

**Figure II.** Bar diagram on means of depression

### Conclusion

The analysis of co-variance of pain and depression level indicated that experimental group I (Yogic practices), and group II (Control group), were significantly improved (decreased) the depression level. It may be due to the effect of Yogic practices. Nearly everything in life requires balance. Yogic practices on its own are a good step toward a healthy life style. However, as individual, it is important to realise 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) pain and depression level, but also as a way to assist in attaining other goals. Yogic practices improved the efficiency of health level significantly.

On the basis of the findings of the study, it may be considered that the yogic practices program is very useful method of training for the low back pain sufferers to decrease the pain and depression within shorter duration. But it only retains for 12 weeks in yogic practices the improvement was slow but it could retain the efficiency for longer duration.

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