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Effect of yoga practices on achievement motivation among back pain patients

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Abstract
The purpose of the present study was to investigate the effect of yoga practices on selected psychological variables among male low back pain students to achieve this purpose. Sixty male schools students studied in various schools of Nagapattinam District. Tamilnadu India. During the academic Year 2014-2015 and were randomly Selected as subject. Their age ranged from 15-17 years. The selected subjects were divide into three groups of twenty subjects each. Group-I Iyengar yogic exercise group. Group II underwent Sundara yogic exercise group. Group III acted as a control group. All the subjects of the three groups were tested on the selected dependant variable Anxiety before the commencement of training programme (Pre-test)and after the respective training for a period of six weeks(post-test).The data collected from the three groups prior to and post experimentation on the selected dependent variables were statistically analyzed to find out the significant difference if any by applying the analysis of covariance (ANCOVA) And the Scheff's test also applied as post hoc test to determine the paired mean differences. In all the cases the level of confidance was fixed at 0.05 for significance. It was concluded that Iyengar yoga practices training group was significantly better than the sundara yoga training group.

Keywords: Low back pain, yoga asana

1. Introduction
Low back pain is an exceptionally common condition in which an estimated half to three-quarters of the adult population will experience at least one memorable episode of back pain per year and up to 1 in 10 will develop chronic back pain. Acute back pain, which resolves within weeks, is typically attributed to the soft connective tissues. Once pain goes beyond three months, it is considered chronic and the physiology of this pain can become quite complex. Chronic back pain is typically attributed to traumatic or degenerative conditions, and may include a variety of physiological, psychological, and social influences. Most patients with chronic back pain will respond to conservative treatments as anti-inflammatory medications, physical therapies, and therapeutic injections become more widespread and better understood. Others won't, and in some cases surgical options exist and have become more common due to the popularization of minimally invasive techniques.

2. Methodology
For the purpose of the study. Sixty male low back pain patients selected Nagapattinam district. Tamilnadu state. Were selected subjects. The age of the subject ranged 15 to17 years. The true randomized group design was used as experimental design in which the subject were divided in to three groups of twenty each. The two experimental group underwent yoga practices and the other group acted as a control group. The subjects were tested prior to and after experimental period on Achievement motivation to assess the selected variable given in table The statistical analysis comparing the initial and final means of Achievement motivation due to Iyengar yoga and Sundara yoga among men low back pain patients men is presented in Table I

3. Results on Achievement Motivation
The statistical analysis comparing the initial and final means of Achievement Motivation due to Iyengar yoga and Sundara yoga among men low back pain patients men is presented in Table I

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Table 1: Computation of Analysis of Covariance of Achievement Motivation

	Iyengar Yoga	Sundara Yoga	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	Obtaine df
Pre Test Mean	23.47	23.20	23.33	Between	0.53	2	0.27	0.01
				Within	1143.47	47	27.23	
Post Test Mean	26.93	25.60	23.60	Between	84.44	2	42.22	1.81
				Within	978.13	47	23.29	
Adjusted Post Test Mean	26.81	25.72	23.60	Between	80.05	2	40.03	39.15*
				Within	41.91	46	1.02	
Mean Diff	3.47	2.40	0.27					

*Significant

Table F-ratio at 0.05 level of confidence for 2 and 47 (df) =3.23, 2 and 46 (df) =3.23.

As shown in Table I, the obtained pre test means on Achievement Motivation on Iyengar yoga group was 23.47, Sundara yoga group was 23.20 was and control group was 23.33. The obtained pre test F value was 0.01 and the required table F value was 3.23, which proved that there was no significant difference among initial scores of the subjects.

The obtained post test means on Achievement Motivation on Iyengar yoga group was 26.93, Sundara yoga group was 25.60 was and control group was 23.60. The obtained post test F value was 1.81 and the required table F value was 3.23, which proved that there was no significant difference among initial scores of the subjects.

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 39.15 was greater than the required value of 3.23 and hence it was accepted that there was significant differences among the treated groups.

Since significant differences were recorded, the results were subjected to post hoc analysis using Scheffe's Confidence Interval test. The results were presented in Table II.

Table II: Scheffe's Confidence Interval Test Scores on Achievement Motivation

MEANS				Required. CI
Iyengar yoga Group	Sundara yoga Group	Control Group	Mean Difference	
26.81	25.72		1.09*	0.94
26.81		23.60	3.21*	0.94
	25.72	23.60	2.12*	0.94

* Significant

The post hoc analysis of obtained ordered adjusted means proved that there was significant differences existed between Iyengar yoga group and control group (MD: 3.21). There was significant difference between Sundara yoga group and control group (MD: 2.12). There was significant difference between treatment groups, namely, Iyengar yoga group and Sundara yoga group. (MD: 1.09).

The ordered adjusted means were presented through bar diagram for better understanding of the results of this study in Figure1.
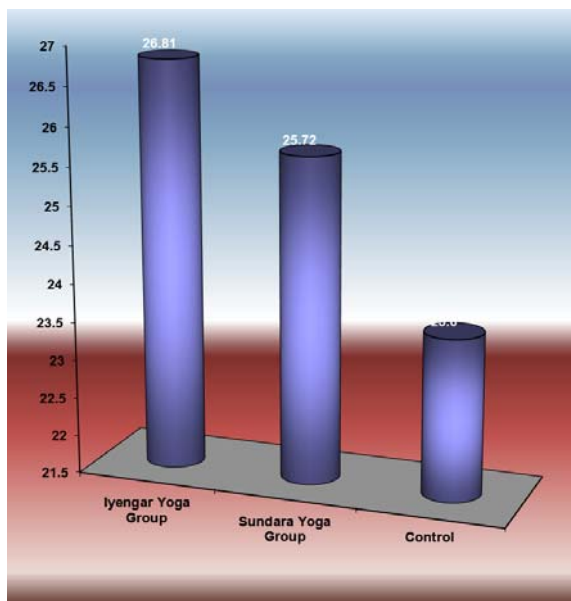

Fig 1: Bar Diagram on Ordered Adjusted Means on Achievement Motivation

4. Discussions on Findings
The effect of Iyengar yoga and Sundara yoga on Achievement Motivation is presented in Table 1. The analysis of covariance proved that there was significant difference between the experimental group and control group as the obtained F value 39.15 was greater than the required table F value to be significant at 0.05 level.

Since significant F value was obtained, the results were further subjected to post hoc analysis and the results presented in Table II proved that there was significant difference between Iyengar yoga group and control group (MD: 3.21) and Sundara yoga group and control group (MD: 2.12). Comparing between the treatments groups, it was found that there was significant difference between Iyengar yoga and Sundara yoga group among male low back pain patients.

5. Conclusion
It was concluded that the varied yogic practices, such as, Iyengar and Sundara Yoga significantly improved psychological variable, achievement motivation among low back pain patients. And Iyengar yoga was found to be effective than Sundara Yoga in improving achievement motivation of the subjects

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