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EFFECT OF YOGIC PRACTICES AND PHYSICAL EXERCISE ON STRESS INDUCED DISEASE (LOW-BACK PAIN)

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Abstract

Man needs Education for the development of physical, mental, and social aspects. Education is a series of experience that enables the individual to a better understanding of the new experience. Physical Education is an integral part of total education. Physical Exercise is an important activity mainly for the development of fitness and motor movement. In the modern ages, due to the development of modern gadgets, the fitness of the human being is declined. When the health of the individual goes down, he gets all types of diseases including back pain. An attempt was made to find out whether the back pain could be reduced by yogic practices or by physical exercises.

The purpose of the study was to investigate the influence of the selected yogic practices and physical exercises on stress induced disease patients. Questionnaire was used for measuring the back pain. To facilitate the study, ninety stress induced disease patients mainly teachers were selected from Delhi. The initial data were collected from the subjects through a questionnaire. The total subjects were divided into three equal groups of which one group served as yogic practice group, the second group served as physical exercise

group, and third group served as control group. Each group consists of thirty subjects. The treatment was given for a period of 12 weeks. A final data were collected at the end of the 12th week. The significant difference among the means of yogic practice group, physical exercise group, and control group for the pre-test and post-test mean gains were determined by 'F' ratio through the analysis of variance. The 'F' ratio for adjusted post-test was computed by analysis of covariance. The level of significance was set at 0.05 levels.

Within the limitations imposed by the experimental conditions, the following conclusions were drawn, Yogic practices and physical exercises significantly reduced the back pain and yogic practices reduced the back pain better than the physical exercises.

Key Words: Yogic Practices, Physical Exercise, stress, Back pain.

YOGIC THERAPY

Yogic therapy implies the mode of treating disorders with yogic means. It contributes to ideal health. The nature of all yogic practices is psycho - physiological, Physiological views are that yoga helps to tone up the entire body. Yoga helps to correct the blood compositions. Yoga tones up glands and visceral muscles.

ALTERNATIVE THERAPY

Millions of people are being exposed to antibiotics and other drugs unnecessarily. Drugs induce illness. People also pay a heavy price for modern medicine. So we must look for some alternative methods of treatment. On this background, people are raising high hopes about yogic therapy. Charoto says "health and physical fitness can be maintained only by carefully selected physical activities which are called exercise, evaluated only in terms of the effects that are obtained in promoting a particular factor of physical fitness."

LOW BACK PAIN

Low back pain is one of the most common ailments of modern man. It has been estimated that about 90 percent of population on some occasion suffer low back pain for a long period of time.

White and Gorden write, "***low back pain affects the quality of life just about everyone".***

WHY IS LOW BACK PAIN COMMON

Low back pain is one of the most frequent problems treated by orthopaedic surgeons. Four out of five adults experience significant low back pain sometime during their life. After the common cold, problems caused by the lower back are the most frequent cause of lost work days in adults under the age of 45. The lower or lumbar spine is a complex structure that connects your upper body (including your chest and arms) to your lower body (including your pelvis and legs). This important part of your spine provides you with both mobility and strength. The mobility allows movements such as turning, twisting or bending and the strength allows you to stand, walk and lift. Proper functioning of your back is needed for almost all activities of daily living. Pain in the lower back can restrict your activity and reduce your work capacity and quality of enjoyment of everyday living.

MATERIALS AND METHODS

The purpose of the present study is to find out the influence of yogic practices and physical exercises on stress induced disease (Low Back Pain) patients among working men and women in Chennai.

SELECTION OF SUBJECTS

Ninety working women of back pain patients, aged between 25 and 50 years workers in Transport Corporation, teachers in colleges and business people working in Chennai voluntarily were selected to take part in this study. The subjects were screened by a competent medical officer who made thorough medical examination to ascertain the possible causes for back pain and isolated those subjects who would not suffer any contradiction. The subjects were divided into three group's namely yogic group, physical exercise group and control group, each group consisting of thirty subjects.

SELECTION OF VARIABLES

The available scientific literature pertaining to the effects on yogic practices and physical exercises on back pain from books, journals, periodicals, magazines and research papers were reviewed for analysis. Taking into consideration of the relevance to the study and the feasibility criteria, back pain is chosen as a variable for this study.

COLLECTION OF DATA

For this study, ninety working women in Chennai were selected as subjects of the age of twenty five to fifty on random basis voluntarily. Back pain was measured by using the questionnaire. This questionnaire was specially intended for measuring back pain by Ransford et.al., The back pain questionnaire was given to all the ninety subjects. The above subjects were divided into three group's namely yogic group, physical exercise group and control group. Each group consists of thirty subjects. Initial data were collected before the treatment by using will mare Questionnaire. The yogic group was treated with yogic practices, and the physical exercise group was treated with physical exercise programme and control group was kept idle for eight weeks. Forty five minutes training programme were administered to the experimental groups on all days except Saturday and Sunday. No subjects involved themselves in any other treatment or other systematic training programme which might have influenced the results. Immediately, after the training period the Questionnaire was administered to all the three groups to obtain the final data.

Yogic Practices

1. Salabhasana
2. Bujangasana
3. Uttanapadasana
4. Shavasana

Pranayama

1. Anuloma-Viloma (Alternate Nostril Breathing)

Mudhras

1. Bhramma Mudhra

Physical Exercises

1. Straight Leg Raises
2. Hamstrings Stretch
3. Prone Lumber Extension
4. Lower Back Extensions
5. Heal Toe Walk
6. Deep Breathing

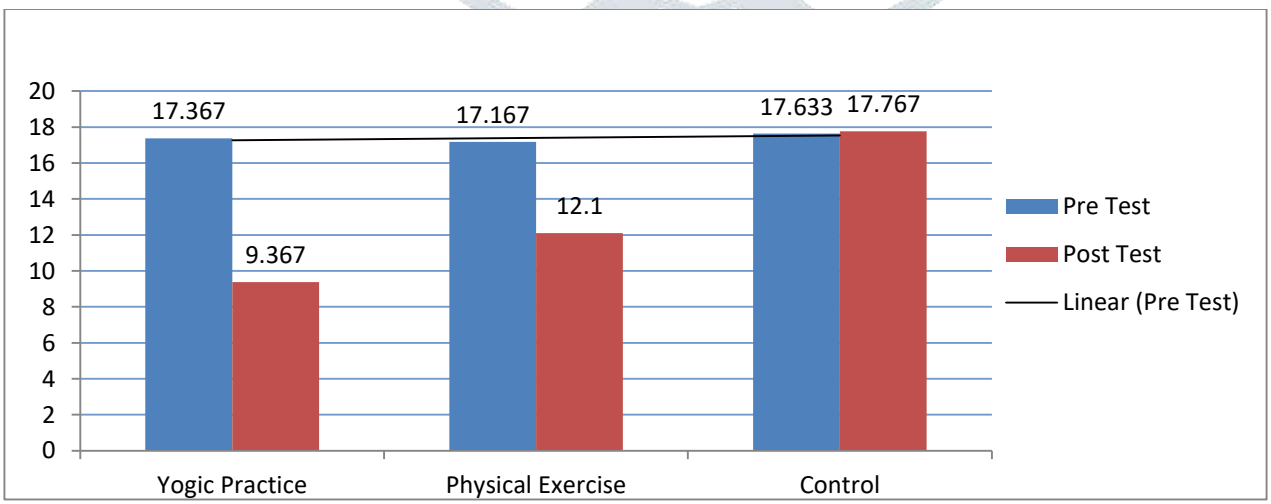
TABLE-I

ANALYSIS OF COVARIANCE OF DATA ON BACK PAIN BETWEEN PRE-TEST AND POST-TEST OF YOGIC PRACTICES, PHYSICAL EXERCISES AND CONTROL GROUP

	Experimental Group-I Yogic Practice	Experimental Group-II Physical Exercise	Control Group	Source of Variance	Sum of Squares	df	Mean Squares	F-ratio
Pre-test Means	17.367	17.167	17.633	B: W:	3.29 288.10	2 87	1.645 3.311	0.497
Post-test Means	9.367	12.10	17.767	B: W:	1101.00 149.00	2 87	550.5 1.713	321.37
Adjusted Post-test Means.	9,375	12.185	17.67	B: W:	43.38 109.90	2 86	21.69 1.278	16.972
Means	2.8096	8.298	5.489					

The table value at 0.05 for df 2 and 87 and 2 and 86 is 3.109.

Figure
BACK PAIN



RESULTS OF BACK PAIN

Table I shows the analysed data on the pre-test means for the three groups. They were 17.367 for experimental group I (yogic practice group), 17.167 for experimental group II (Physical

exercise group) and 17.633 for control group respectively. The required table 'F' value for the degrees of freedom 2 and 87 was 3.109. When it was compared to the obtained 'F' ratio of 0.497 it was found to be insignificant at 0.05 level of confidence.

The post-test means were 9.367 for the experimental group 1 (yogic practice group), 12.10 for the experimental group II (physical exercise group) and 17.767 for the control group respectively. The obtained F ratio was 321.377. The table 'F' value for the degrees of freedom 2 and 87 was 3.109. When the calculated 'F ratio was compared with the table 'F ratio, it was found to be significant at 0.05 level of confidence.

TABLE-1(A)

SCHEFFE'S TEST FOR THE DIFFERENCE BETWEEN THE ADJUSTED POST-TEST PAIRED MEANS OF BACK PAIN

Experimental Group I *(Yogic Exercise)*	Experimental Group II *(Physical Exercise)*	Control Group	Mean Difference	F-ratio
2.8096	8.2983	-	5.4887	1.2454
2.8096	-	5.4886	2.679	95.082
-	8.2983	5.4886	2.8097	829.39

The adjusted post-test means were 9.375 for the experimental group I (yogic practice group), 12.185 for the experimental group II (physical exercise group) and 17.67 for the control group respectively. The calculated 'F' ratio was 16.972. The table 'F' ratio for the degrees of freedom 2 and 85 was 3.109. When the calculated 'F' ratio was compared with the table 'F' ratio it was found to be significant at 0.05 level of confidence.

Table I(A) shows that the Scheffe's post hoc test ordered adjusted final mean difference for different groups. The difference between the adjusted means for the experimental group I (Yogic practice) and control group was 5.49. The difference between experimental group I (Yogic practice) and experimental group II (Physical exercise) was 2.679. The difference between experimental group II (Physical exercise) and control group was 2.8097.

The obtained 'F' ratio of the above three comparisons were 1.2454, 95.082 and 829.39 respectively. The table 'F' ratio was 3.109. Hence, the first comparison was insignificant and other two comparisons were significant. Of the three groups experimental group I (Yogic Practice) was found better in reducing the back pain.

CONCLUSIONS

Within the limitations imposed by the experimental conditions, the yogic practices and physical exercises significantly reduced the back pain and the yogic practices reduced the back pain better than the physical exercises.

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