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INFLUENCE OF YOGIC BREATHING INTERVENTION PROGRAMME ON STRESS AMONG ADULT MEN

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Abstract: The purpose of the study was to find out the influence of yogic breathing intervention programme on stress among adult men. To achieve the purpose of this study, twenty (n=20) male adult were randomly selected from St. John's College, Palayamkottai, Tirunelveli District, Tamilnadu, India. The age of subject's was ranged from 18 to 22 years. The selected participants were randomly divided into two groups such as Group 'I' underwent yogic breathing intervention programme (n=10) and Group 'II' acted as control group (n-10). Group 'I' underwent yogic breathing intervention for five days and one session per day and each session lasted between 45-50minutes for six week period. Group 'II' was not exposed to any specific training but they were participated in regular activities. The data on stress were collected and administered by standardized questionnaire such as Everly and Girdano's Questionnaire respectively. The pre and post-tests data were collected on selected criterion variables prior to and immediately after the training programme. The pre and post-test scores were statistically examined by the dependent-'t' test and Analysis of Covariance (ANCOVA) for each and every selected dependent variable separately. It was concluded that the yogic breathing intervention group had shown significantly improved in stress. However, the control group had not shown any significant improvement on any of the selected variables such as stress.

Index Terms – Yogic Breathing Intervention Programme, Stress

1. INTRODUCTION

Yoga is a very ancient discipline. It is recognized as one of the most important and valuable gifts of the Indian heritage. Today the world is looking to Introduction 25 yoga for solving the various problems men are facing. At no time in the past yoga has attracted so much attention from people in so many places in the world as it today. Yoga is an indigenous physical and mental training [1]. French scholar, Masson Oural, has described yoga as the permanent basis of Indian culture. Hence it has its varieties and diversions as it has its right and discipline, the different kinds of yoga have played a vital role in forming the spirit of modern India [2]. Breathing consists of a regular rhythmic contraction and relaxation of the diaphragm. Breath can be hold voluntarily for a while [3]. Holding the breath during inhalation causes the air drawn inside the lungs gets more chance of mixing with stale air in those pockets. As more time is made available for air mixing, stagnant stale air is removed and supply of fresh air goes inside those pockets [4]. Similar action takes place during exhalation also. The overall effect of these actions is that entire surface of alveoli, or air sacs inside the lungs gets larger amount of fresh air [5].

The specificity of exercises conducted in pranayama training program and fact that this group received proper breathing techniques to improvement mechanics might have resulted in the development of more functional and relevant motor programs that control the complex intramuscular coordination [6]. Pranayama is an important component of yoga training. Pranayama (controlled breathing exercise) improves the airway reactivity in the asthmatic individuals. It was noted that high frequency breathing exercise resulted in more than 10-fold increase in expired minute ventilation [7].

2. METHODOLOGY

2.1 Subjects and Procedures

To achieve the purpose of this study, twenty (n=20) adult men were randomly selected from St. John's College, Palayamkottai, Tirunelveli District, Tamilnadu, India. The age of subject's was ranged from 18 to 22 years. The selected participants were randomly divided into two groups such as Group 'I' underwent yogic breathing intervention programme (n=10) and Group 'II' acted as control group (n-10). Group 'I' underwent yogic breathing intervention for five days and one session per day and each session lasted between 45-60 minutes for six week period. Group 'II' was not exposed to any specific training but they were participated in regular activities. The data on stress were collected and administered by standardized questionnaire such as Everly and Girdano's questionnaire respectively. The pre and post-tests data were collected on selected criterion variables prior to and immediately after the training programme.

2.2 Determination of Stress Questionnaire

Stress questionnaire was developed by Everly and Girdano's used to measure the stress level of the subject. Standardised questionnaire of Everly and Girdano's was used to measure the stress of the subject. There are 14 statements relating to various situations of life. There were four levels of responses almost, always, seldom true and never true. The subjects were made to mark tick in the column which every response person felt was true his nature. The inventory was scored with the help of a scoring key given below. The scores obtained for each statement was added and treated as individual scores. The range of score was 14 to 56. The lesser the score the lower the psychological stress.

2.3 Statistical Tools

For analysing the collected data, the researcher gone through paired sample-'t' test to find out the significant improvement of mean score between pre and post-test of the selected groups. And the researcher chose analysis of covariance (ANCOVA) to find out the significance difference between both groups at the 0.05 level of confidence was fixed to test the level of significance difference.

3. Result and Findings

The influence of yogic breathing intervention programme on stress were analysed and presented in the below table,

Table-1

Computation of 't' - ratio between Pre and Post-Test Means of Experimental and Control Groups on Stress (Scores)

Criterion Variables	Test	Experimental Group	Control Group
Stress	Pre test	35.19	35.43
	Post test	29.04	34.86
	't'test	8.47 *	1.05

*Significant at 0.05 level. (Table value required for significance at .05 level for 't'-test with df 9 is 2.26)

The table-1 shows that the pre-test mean values on stress among experimental and control groups were 35.19 & 35.43 respectively and post-test mean values are 29.04 & 34.86 respectively. The obtained dependent t-ratio values between pre and post-test means of experimental and control groups are 8.47 & 1.05 respectively. The table value required for significant difference with df 9 at 0.05 level is 2.26. Since, the obtained-'t' ratio value of experimental group was greater than the required table value, it was concluded that experimental group had significantly improved on stress due to the influence of yogic breathing intervention programme. However, the control group has not improved significantly. The obtained-'t' value is less than the table value, as they were not subjected to any specific training.

Table-2
Analysis of Covariance on Stress of Experimental and Control Groups

Experimental Group	Control Group	SOV	SS	df	MS	F-ratio
Adjusted Post Test Mean						
28.96	34.73	B.S	99.65	1	99.65	17.21*
		W.S	98.43	17	5.79	

** Significant at 0.05 level. Table value for df 1, 17 was 4.45.*

From the table 2 shows that the adjusted post-test mean values on stress. The obtained f-ratio for selected dependent variables was 17.21 the required table value of df 1 and 17 was 4.45. It shows that the obtained f ratio values were greater than the required table value at 0.05 level of confidence. The result of the study indicated that there was significant mean difference existed between the experimental and control groups on stress. The below figure 1 shows the pre, post and adjusted post-tests mean values of experimental and control groups on stress.

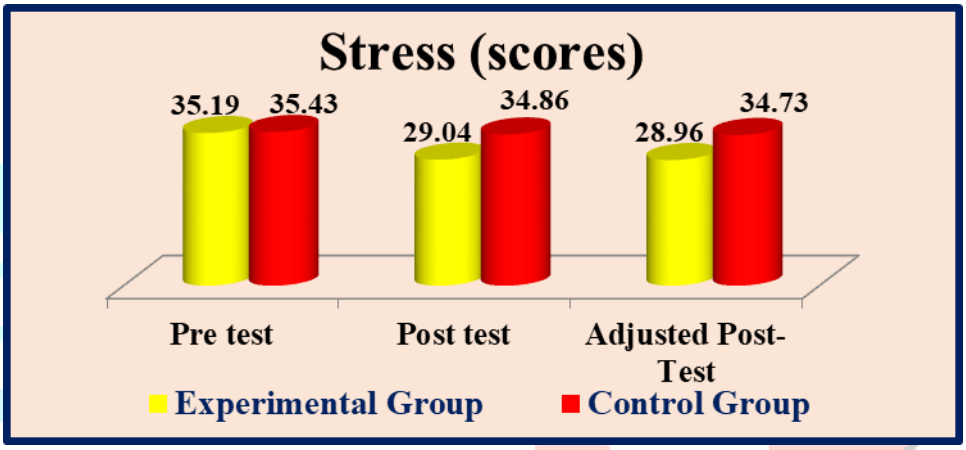

Fig 1: Pre, post and adjusted post-tests mean values of experimental and control groups on stress.

4. DISCUSSION ON FINDINGS

The result of study indicates that there were significant differences between experimental and control groups on stress among adult men. Stress help to create and enhance individual and team spirit awareness, which leads to better team awareness. Stress help individuals' to learn to be aware of personally do well and keep doing more of learn 'why' we learn more to improve our self and 'how' to be better than before, reach a higher personal standard and performance as well as needed to aware personally themselves and others. The following studies are supported to the result of this investigation from Zeyad Tareq Abdul Razzaq., Zaid Al-Madfai., & Ghassan Thabet Saeed (2016) conducted the effect of training and sport type on pulmonary function parameters among Iraqi soccer and futsal players [8]. Meera, Mohanakrishnan, & Prasanna, (2008) analysed the effect of comprehensive yoga practice on selected psychological variable among men students [9].

Grieco, (2014) assessed the acute effect of breathing exercises on heart rate variability in type 2 diabetes [10]. Shukla, (2020) evaluated the effect of yogic breathing practice on vital capacity of football players [11]. Anuja, & Arumugam, (2019) conducted the effect of yoga asana with pranayama practices on high- and low-density lipoprotein among men type-2 diabetes patients [12]. Chaudhuri & Ghar, (2016) studied to compare the effect of raj yoga and progressive muscle relaxation on cardio respiratory parameters in Indian males of reproductive age group [13]. Kumar & Arumugam, (2018) conducted the impact of yoga asana practices on abdominal strength among football players [14]. Suriya & Arumugam, (2018) evaluated the influence of varied breathing exercises on vital capacity and breath holding time among kabaddi players [15]. Vigneshwaran & Kalidasan, (2018) assessed the influence of varied breathing exercises on lung capacity and breath holding time among soccer players [16].

5. CONCLUSIONS

From the result of the present study the following conclusions were drawn,

1. There was significant improvement on stress due to the influence of yogic breathing intervention among adult men.
2. There was significant difference existed between experimental and control groups on stress due to the influence of yogic breathing intervention among adult men.
3. However the control group had not shown any significant improvement on any of the selected variables.

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