



EFFECT OF YOGIC PRACTICES ON SELECTED PHYSIOLOGICAL VARIABLES AMONG THE STUDENTS OF PHYSICAL EDUCATION

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ABSTRACT The main purpose of the present study was to find out the effect of yogic practices on selected physiological variable of Physical Education College students in Abhiruchi Institute of Physical Education College of Guwahati. For this purpose 60 students were selected from BPE (3 years) and B.P.Ed (1 year) batch, using accidental sampling the age group ranged between 21-25 years. All the students were divided into two group one control (N=30) group and second experimental (N=30) group. The experimental group was given 12 week training and control group was no training given that period. After 12 weeks training the results were statistically analyzed and following conclusion was drawn. The study revealed that yogic practices effect on physiological variables however, there was significant effect on Respiratory rate, Heart rate and Breath holding after 12 weeks yogic practices training program.

KEYWORDS : Yoga practices and physiological variables

INTRODUCTION

Yoga means the experience of oneness or unity with inner being. The most important benefit of yoga is physical and mental health. This unity comes after dissolving the duality of mind and matter into the supreme reality. It is a science by which the individual approaches truth. The aim of all yoga practice is to achieve truth where the individual soul identifies itself with the supreme soul or God. Originally yoga is spiritual but nowadays many researchers proven that yoga is beneficial in no of physical and mental challenges also it is used as a increase for physical fitness. It is the means to reach complete self realization. Physical education is the education through physical activities for the development of total personality of the child and its fulfillment and perfection in body, mind and spirit. It aims to develop physical competence and knowledge of movement and safety, and their ability to use these to perform in a wide range of activities associated with the development of an active and healthy life style. It also develops confidence and generic skills, collaboration, communication, creativity etc. Yoga asana are ways of moving and for holding the body in different position. Yoga asana several exercises or postures that work for fitness and health.

OBJECTIVE OF THE STUDY:

To find out the effect of yogic practices on physiological parameters among students of physical education.

RESEARCH METHODOLOGY

For this study subject were selected randomly from Abhiruchi Institute of Physical Education, Guwahati age of the students was between 21-25 years. Pre and post test were administered on the subjects for measuring resting heart rate, respiratory rate and breathe holding. The yoga practice was students for 3 month and 6 days per week 50 minutes of training session. The statistical tools of mean, standard deviation and 't' test were used for calculate and analysis of data. The following is the analysis of data pertaining to the effect of yogic practices on selected physiological variables among the students of physical education.

RESULT & DISCUSSION

The purpose of the study was to find out the effect of yogic practices on selected physical fitness and physiological variables among the students of physical education. To achieve the purpose of the study, thirty students control group and thirty students experimental group, from Abhiruchi Institute of Physical Education, Guwahati were selected as subjects. The age was ranged from 21 to 25. The selected subjects were divided into two groups namely, Experimental group consist of thirty students and Control Group consist of thirty students who were not any practices. Experimental groups were subjected to yogic practice over the period of three month and five sessions in a week in regular evening period. The selected two variables for the study were assessed by the following test items-Physical fitness test included-12 min Run and walk, Broad jump, Sit ups, Pull ups, Shuttle run and sit and reach catch and Physiological test include Respiratory

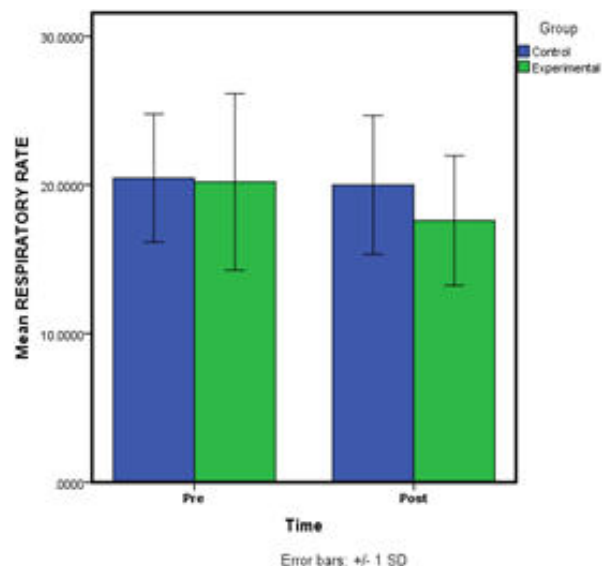
Rate, Heart Rate and Breath Holding. The data were collected before and after the both Experimental and Control group. The step wise results as well as interpretations have been presented in this chapter. Data was analyzed by independent sample test by using SPSS. Data was organized in different table's namely descriptive statistics. Factor wise group was also presented for better understanding of interaction effect.

Table-1- Comparison of post test mean value of Respiratory rate between control and Experimental group

Group		N	Mean	SD	SED	df	t-value	P Significance level
Control	Pre	30	20	4.67				
	Post				2.40	58	2.05	0.04
Experimental	Pre	30	17.6	4.36				
	Post							

(Source: Primary Data)

This study found that experimental group statistically significantly higher Respiratory rate (17.6 ± 4.36) at the end of training programme compared to control group (20 ± 4.67) $P=0.04$ (Post study time).



In the present study it has been hypothesized that there will be significant effect of yogic practice on selected physical fitness and physiological variables. On the basis of analysis and interpretation of the data for effect of yogic practices on selected physical fitness and physiological variables, the results of study revealed that there is significant difference was found in 12 min Run and walk, Sit ups, Broad jump, Pull ups and Sit reach catch except the Shuttle run of physical fitness components of physical education student in pre and post test of different yoga practices, whereas there is no significance difference found in 12 min Run and walk, Sit ups, Pull ups, Broad jump and Sit and reach catch of physical fitness components of physical education students in pre and post results of control group. It is significant at .05 level of significance. Before this experiment, many studies also have been performed on the physical fitness components; out of those some studies were also same. Mark (2007) in his study, "Effect of Hatha Yoga Practice on the Health-Related Aspects of Physical Fitness". In this studied found that there were total ten health untrained volunteers nine female and one male. And their range in age between 18-27 years. The results of this investigation indicate that 8 weeks of hatha yoga practice can significantly improve multiple health-related aspects of physical fitness in young, healthy, predominantly female subjects. More specifically, yoga training can increase muscular strength, muscular endurance, flexibility, and cardio respiratory endurance. However, in the present study, hatha yoga did not have a significant effect on either body composition or pulmonary function. Bal & Kaur (2009) in their study, "Effect of selected asana in hatha yoga on agility and flexibility level", in this studied found that the thirty (N=30) male students were selected as subject for the present study from D.A.V. Institute of Engineering and Technology, Jalandhar (Punjab), INDIA. All the subjects ranged between the chronological age of 18-25 years. The selected subjects were further divided into two groups. Experimental treatment was then assigned to group "A" while group "B". The hatha yoga practices showed that the significant improvement in flexibility and agility. Gaurav (2011) in his study, "Effect of Hatha Yoga Training on the Health-Related Physical Fitness". In this studied found that there were total 30 randomly selected of department of physical Education Guru Nanak University. The age between 18-24 years. Hatha yoga practices can significantly improve multiple health-related aspects of physical fitness in young, healthy, predominantly female subjects. More specifically, yoga training can increase strength, agility, muscular power and speed. However, in the present study, hatha yoga did not have a significant effect on endurance. These data provide more evidence to support the beneficial effect of Hatha yoga for improving the health related physical fitness of female BPE students. Rayat (2015) in his study, "Effect of yoga on selected physical and physiological variables of physical education students", in this study found that yoga training beneficial for improvement in muscular strength and endurance of trunk and improve the flexibility of physical education students. Purohit, Pradhan & Nagendra (2016) in their study "Effect of Yoga on UROFIT Physical fitness Parameters on adolescents dwelling in an Orphan Home". In this study found that total 72 healthy adolescents participated from an Orphanage. They were randomized (based on their age and gender) and allocated into two groups as Yoga group (n=40; 14 girls, 26 boys) Control Group (n=32, 13 girls, 19 boys). The Yoga Group underwent 3 months of yoga program in a schedule of 90 min/day and 4 days/week. The Control Group underwent day to day activities. Before the study the researcher used the (EUROFIT) battery and collected the data. EUROFIT Battery through find out the students – Flamingo Left Leg balance (FLL), Flamingo Right Leg Balance (FLR) left hand tapping test (PTL), Right Hand Tapping Test (PTR), Sit and Reach (SAR), Standing Broad Jump (SBJ), Sit-ups (SUP), Bent arm hang test (BAH), shuttle Run (SHR). After 3 month compare to both group and showed the result that significant difference in FLL, FLR, PTL, PTR, SAR, SBI and SUP in Yoga Group compared to Control Group. At last, 3 months Yoga program was found useful for the young orphan adolescents in improving their physical fitness. Therefore, after observed the results of the study and review of different researcher studies we can say that significant increase the physical fitness components of cardiovascular endurance, flexibility, arm strength, abdominal muscle strength, and explosive strength of leg strength fitness level of physical education students after practicing different yoga practices like asana, pranayama, mudra, bandhas, meditation and shatkarma. It's very beneficial for the improvement of physical fitness level of physical education students.

The study showed that there is significant difference in found in physiological components Respiratory rate, heart rate and Breath holding of physical education students in pre and post different yoga

practices whereas there is no significance different in found in physiological variables Respirator rate, Heart rate and Breath holding of control group. It's significant at .05 level of significance. Elson, Hauri & Cunis (1977) in their study, "Physiological changes in Yoga Meditation", showed that a group of 11 mediators using AnandaMarga Yoga techniques were matched individually with non meditating controls. Controls were instructed to remain "wakefully relaxed for 40 min, while the others meditated for the same amount of time. Six of the 11 controls fell asleep during the 40 min (defined by k-complexes and spindles in the EEG), while none of the fell asleep. Rather, mediators remained in a relatively stable state of alpha and theta EEG (electroencephalogram) activity. Meditation was also increase in basal stain resistance and decrease by a respiratory rate. Some physiologic changes observed during meditation continued in to the post meditation resting periods. These findings suggest that AnandaMarga Meditation produces a physiological effect different from that observed in controls who try to relax with their eyes closed.

CONCLUSIONS

After finished 12 weeks yoga training the results was statistically analyzed and the following conclusion was drawn. The study revealed that the yoga practices have a considerable effect on physiological variables however; there was a significant effect on respiratory rate, heart rate and breath holding capacity. So, we can say that yoga practices would improve the physical education student's physiological variables significantly.

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