



EFFECTS OF 12 WEEKS OF YOGA TRAINING ON RESTING HEART RATE OF COLLEGE GIRLS

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ABSTRACT

The purpose of the present study was to investigate the effect of yoga training program on resting heart rate. Selection of Subjects: Total 15 female subjects who were studying in Tikaram Degree College, Aligarh, were randomly selected for this study. Their age was ranged in between 18-25 years. Selection of Variables: Resting Heart Rate of female students was selected for this study. Hypothesis: It was hypothesized that there would be significant effect of yoga training on the Resting Heart Rate of the female students. Statistic: For analysis of the data Mean & SD were calculated and to examine the effect of yoga training program on the chosen variables. Paired t test was applied, and level of significance was set at .05 level. Results: Significant difference was observed in the pre and post experimental means of heart rate of yoga training group. It was concluded that yoga training caused significant change in the Heart Rate.

Keyword: Yoga, Asana, Pranayama and Heart Rate.

INTRODUCTION

Being involved in physical activity is one way for teenagers to cope with this changing time in their life. Adolescents and young adults, both male and female, benefit from physical activity (Myers et al.). Researchers from the CDC (2002) found that benefits of regular

physical activity produces strong healthy bones and muscles, reduces the risk of obesity and chronic diseases. These researchers also state that nearly half of American youths aged 12 to 21 years are not physically active on a regular basis and about 14% of young people report no physical activity. Furthermore, participation in all types of physical activity declines as age or grade in school increases. Among children and teens aged six to nineteen years, 16% (over nine million) are overweight according to the 1999-2002 data (CDC). Physical Education is but one tool that can be used to combat this growing problem.

Yoga may help teenagers learn about their body and discover what their strengths and limitations are. Yoga encourages youth to explore their natural flexibility, enhanced physiological parameters and to become stronger through natural and functional physical movement using their own body weight. Yoga allows teenagers to focus on the within time which is time focusing on themselves, visualization, relaxation and enter a non-competitive environment. One important area of inquiry, therefore, is to identify if gains in self-esteem are the same in regular physical education classes vs. a physical education class that includes yoga as an integral part of its curriculum. K. Bridges & M. Madlem (2007).



METHODOLOGY

The purpose of the present study was to investigate the effect of three months of yoga training on the resting heart rate of female participants. For the purpose this study fifteen (N=15) female students were selected randomly from Tikaram Degree College, Aligarh. U.P. India. Their age was between 18 to 25 years. These subjects participated voluntarily in this programme and before the start, they were examined by the physician to ascertain that they were free from any medical problem and were fit enough to undertake the yoga training programme for a period of three months. The training session was consisted of 48 minutes every day, for 6 days a week for three months. Every training session was of 60 min with loosening exercises of 08 minutes and four minutes of attendance, 48 minutes of main course and 10 minutes of meditation. The yogic exercise were of standing postures, sitting postures, both supine & proline postures, kriyas, pranayama and meditation with the gradually increased frequency and duration from their initial to final stage.

Collection of Data and Administration of Tests

In order to acquaint the subjects with the specific purpose of the research being conducted, all the subjects were assembled in the athletic track of Tikaram Degree College, Aligarh, All the necessary information pertaining to the requirement of the experimental procedure was imparted to them. To make the research findings more authentic, positive attitude towards investigation was emphasized.

The data for the physiological responses of college girls was obtained with the help of Omron HEM- 7120 Heart Rate Standard Monitor supplied by Galaxy Informatics (India). The Heart Rate was recorded in beats per minute. The data on Heart rate were taken

prior to the experimental programme at resting condition. Pre-test data was collected two days before the commencement of the training program and post-test data was collected after the training programme .

Collection of Data

Resting Heart Rate: Resting Pulse Rate of each subject was recorded in the morning session. The subjects were asked to sit and relax comfortably on a chair 10 minutes before the pulse rate was taken. The investigator wraps the cuff around the arm by placing the arm on table so that the cuff will be at the heart's level. Then press the start/stop button, and the cuff started to inflate automatically. When the measurement was done, the arm cuff automatically deflated. The resting heart rate at rest were recorded.

Statistical Procedure

For analysis of the data, Mean and SD were computed. The data was analysed using SPSS version 21. Paired t-test was applied to find the significant difference between pre and post experimental means. For testing the hypothesis the level of significance was set at 0.05 level of significance.

FINDING AND RESULTS

TABLE-1
SIGNIFICANCE OF DIFFERENCE BETWEEN PRE AND POST
TEST PERFORMANCE OF RESTING HEART RATE

Test	Mean	SD	SE Mean	DM	SE	"t" ratio
Pre test	92.53	19.10	4.93	6.26	.720	8.70*
Post test	86.26	17.74	4.58			

*Significant at 0.05 level $t_{0.05}(14) = 2.042$

Table-1 reveals the descriptive analysis of yoga training group on Heart Rate. In this the yoga group pre test shows value of mean and standard deviation (92.53±19.10) respectively.



The yoga group post test shows value of mean and standard deviation (86.26 ± 17.74) respectively. It is evident from table-1 that there was a significant difference between the means of pre and post test in Heart Rate of yoga group. The mean difference was calculated as 6.26 and standard error of difference was .720 since the obtained value of paired 't' (8.70) was higher than the tabulated value of 't' (2.042) which was required to be significant at (14) degree of freedom with 0.05 level of significance.

The graphical representation of mean and standard deviation of pre and post test performance of different training group in resting pulse rate has been presented in figure 1.

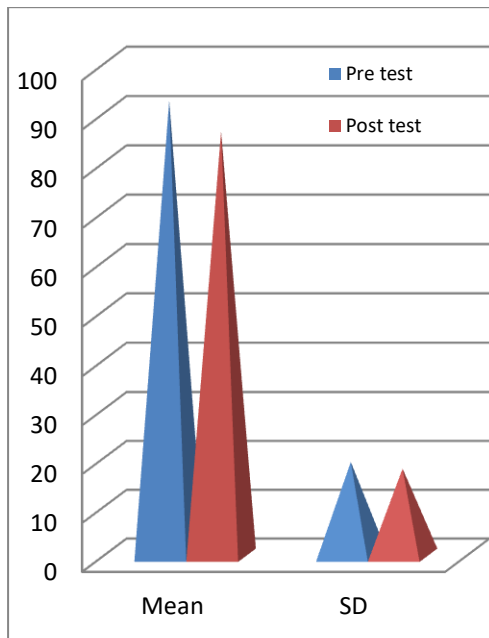


Figure 1: Comparison of mean and SD scores of pre and post test of yoga training group in Heart Rate

Discussion of Findings

The statistical analyses showed significant difference in pre and post test means of resting pulse rate of yogic group after the treatments. The present study was supported by the study of, Deepak Kumar Singh and Subhankari Prasad Chakraborty (2018) they aimed to observe the influence of selected yogasana and callisthenic practices on heart rate and blood pressure of healthy female college student volunteers. After 8 weeks of training, it was observed that significant reduction in the heart rate, occurs in the subjects. These findings suggest that the yogasana and callisthenic practices significantly increase the efficiency of the heart and quality of life of the selected female college student volunteers. Jaskiran et al. (2001) studied 20 female volunteers who were undergoing the certificate course at SAI NSNIS, Patiala. They did a total of four hours of yoga exercises, six day a weeks. A two test battery, involving lying to standing test and cold pressor test were used to assess the functional status of their autonomic nervous system. The same measurements were repeated after four weeks of yoga training. It was observed that along with the some other physiological parameters the resting heart rate reduced significantly.



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