

Impact Of Yogic Exercises And Pranayama On Cholesterol Of Women Aged 18 – 25 Years.

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Abstract

Yogic traditions have been an inherent part of Indian subcontinent for the past 5000 years. With a multitude of benefits ranging from physical health to mental stability, the inclusion of yogic ideas into modern society has never been more prevalent. Yogic exercises and pranayama constitute towards physical health and the studying the physiological effects of these two disciplines on human body has led to the improvement in quality of life. This study aims at understanding the effects of yogic exercises and pranayama on total cholesterol of females between the ages of 18 to 25 years. A total of 50 females were exposed to an exclusively designed yogic training schedule that lasted for 90 minutes for a total span on six months. The females were equally split into two groups, one of which was set to be as a control for the other 25 test subjects. Cholesterol count of all 50 females was recorded before and after the commencement of yoga based training schedule. The study found that all 25 females from the test group had a significant positive effect on their cholesterol count after six months of following the yogic regimen

Keywords:

Cholesterol, Pranayama, Asanas, Physiological variables.

INTRODUCTION

The ever present and indomitable quest of humans' journey into their own selves has lead humanity on a part of exploration and self improvement that can be dated back to their humble beginnings. Human beings from all around the globe have tried to comprehend the vast complexity of the world and in turn endeavored to improve their self spiritually and physically. Indian subcontinent in the early stages of social and cultural evolution around 5000 years ago witnessed the birth of a spiritual practice that would not only advance our understanding of mind and body, but actually provide a new way of life that would be followed by human beings to this very day. This birth of Yogic traditions in the early social evolution of Indian subcontinent saw advancements that lead to the development to physical exercises, mantras, breathing techniques and philosophical teachings that would consistently evolve over the time and adapt to the ever changing world. Modern times saw the introduction of Yogic traditions to the western world where its benefits were being understood, firstly in physiological terms and secondly in spiritual form. Yogic lifestyle has now become synonymous with physical health and prowess and its inclusion in various walks of life has made yoga accessible to men and women across the globe. This study focuses on the physical benefits of yoga by the inclusion of yogic exercises (known as asanas) and breathing techniques (known as pranayama) to understand the effects on young women between the ages 18 – 25 years. More specifically, cholesterol levels of females were studied by following a special yoga based exercise regimen that constituted 10 yogic exercises and 6 pranayama, organized in a 90 minute exercise schedule lasting for a total of six months. A group of 50 females was then divided into two sub groups where first contained 25 females under control group and the other sub group contained 25 females under test group. Cholesterol levels in all females were measured before and after the affect of yogic exercises and pranayamas.

Objective of the study

To study the effect of yoga and pranayama on cholesterol of women of the age group of 18-25 years

MATERIALS & METHODS

The present study was organized to know the effect of yogic exercise and pranayama on the females of 18-25 age group. The study was conducted at Panipat district in Haryana state. The study was conducted for the period of six months six days in a week for 90 minutes.

The sample of the study selected of 50 females age group of 18-25 years. The subjects were further divided into two groups. Experimental group and control group. Experimental group containing 25 subjects and control group containing 25 subjects. The selected sample of experimental group go through the training for six months under the direct supervision of yoga expert and researcher. The intervention consisted of vajarasana, makar asana, padam asana, sukhasana, tadasana, Trikonasana, Bhujang asana, Manduka asana, Varikhasana, Shavasana and pranayama Ujjjai pranayama, sheetali sheetkari, kapalbhati, anulom-vilom and bharamari pranayama which were performed early in the morning from 6.00 to 7.30 am daily at the panipat. The subjects of the experimental group were given training of six days in a week (mon- sat) for duration of 90 minutes each day. The experimental group were given instruction and demonstration in the training programme. It was assured that the subjects of experimental group strictly follow the instruction and training schedule. The subjects of control group were engaged in light exercises and lead up games.

RESULT & DISCUSSION

The variable Total cholesterol (TC), was determined in fasting blood samples taken on the before training and after training (last day of training) with the help of medical expert. After getting the reports of the subjects the data was analyzed statistically.

The descriptive statistics (Mean and SD) was calculated for the description of selected variables and to analyzed the data. 't' Test was used to find out the differences between pre and post test of both the group experimental and control group. To achieve the objective of the study after six month training of yogic exercise and pranayama the collected data were analyzed statistically to find out the difference in the pre and post test scores of the subjects. Table-1 shows the t-ratio, S.D. and mean score of pre and post test of experimental group, age group of 18-25 on total cholesterol. The t-ratio 9.88 was significant at .01 level of confidence. There was significant difference between pre test (153.80) mean value and post value (142.40) mean value of total cholesterol. Table-2 shows the t-ratio, S.D. and mean score of pre and post test of control group, age group of 18-25 on total cholesterol. The t-ratio -1.63 was not significant. There was no significant difference between the pre test (134.34) mean value and post test (127.83) mean value of total cholesterol. So the control group shows that there was no effect of yogic asanas and pranayama on the total cholesterol of age group of 18-25 control group of female.

Table-1 comparison of pre test and post test of age group of 18-25 experimental group on Total Cholesterol.

Sources	N	Mean	S.D.	t-ratio
Pre test	25	153.80	33.76	9.88**
Post test	25	142.40	30.66	

significant at .01 level of confidence.

Table-1 shows the t-ratio, S.D. and mean score of pre and post test of experimental group, age group of 18-25 on total cholesterol. The t-ratio 9.88 was significant at .01 level of confidence. There was significant difference

between pre test (153.80) mean value and post value (142.40) mean value of total cholesterol. So the positive hypothesis that the yogic asanas have effect on the total cholesterol of age group of 18-25 of experimental group of female has been accepted at .01 level of confidence.

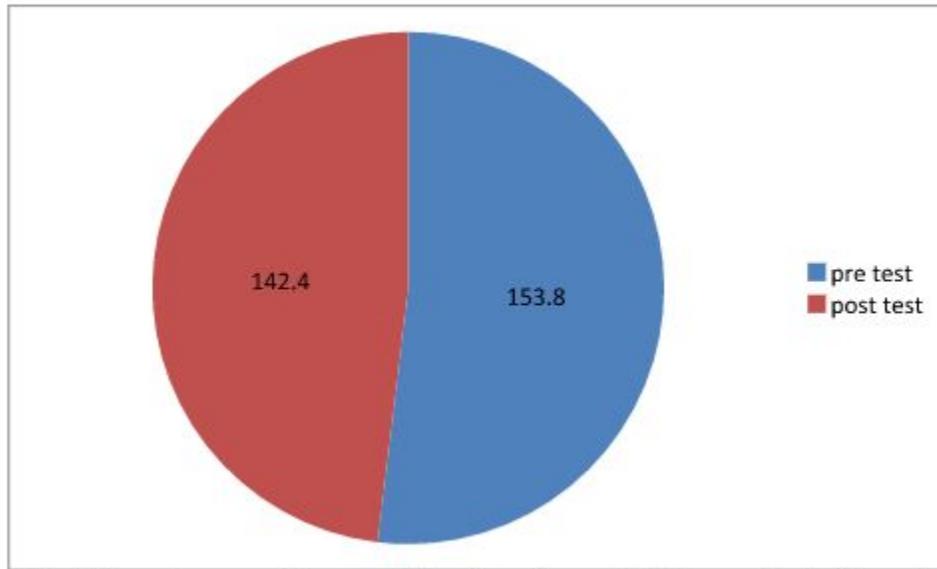


Fig.1: Mean of pre test and post test of Experimental group of 18-25 age on Total cholesterol

Table-2 comparison of pre test and post test of age group of 18-25 control group on Total cholesterol

Sources	N	Mean	S.D.	t-ratio
Pre test	25	134.34	28.41	-1.63
Post test	25	127.83	37.27	

Table-2 shows the t-ratio, S.D. and mean score of pre and post test of control group, age group of 18-25 on total cholesterol. The t- ratio -1.63 was not significant. There was no significant difference between the pre test (134.34) mean value and post test (127.83) mean value of total cholesterol. So the control group shows that there was no effect of yogic asanas and pranayama on the total cholesterol of age group of 18-25 control group of female .

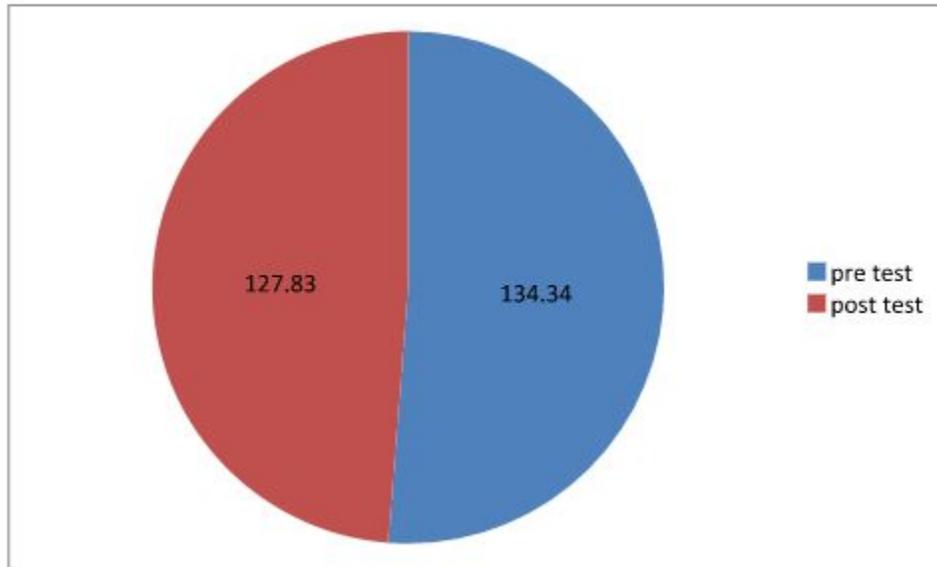


Fig-2 Mean of pre test and post test of control group of 18-25 age on total cholesterol

Fig-3 comparison of control group and experimental group of total cholesterol on age group of 18-25.

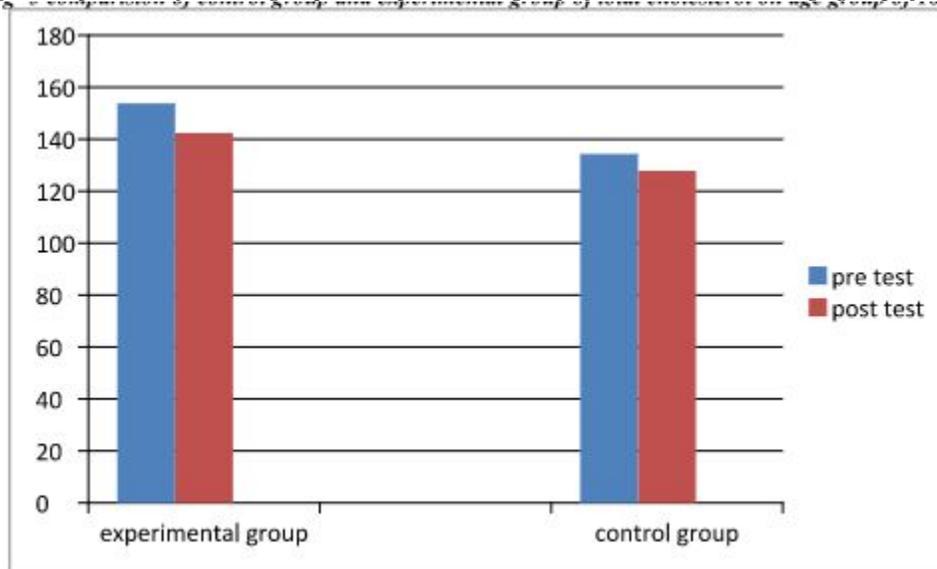


Fig-3 shows the results of experimental group and control group of total cholesterol on age group of 18-25.

CONCLUSION

Data highlighted above was calculated over the span of six months and shows a stark comparison between the cholesterol levels of control and test groups. The control group comprising of females between ages 18 to 25 had undergone basic warm up, general exercises and lead up games for six months. The results shown in Table 1 indicate no significant change in the cholesterol levels of control group. These results are backed up by the t- ratio not reaching a significant level (0.1) of confidence. The difference in the mean value of cholesterol in pre tests (134.34) and post tests after six months (127.83) also does not bear a significant value and leads to the conclusion that general exercises do not help in the reduction of cholesterol levels in females between the ages of 18 to 25 years.

The results shown in table 2 describe the parameters associated with cholesterol levels of test group of females between the ages of 18 to 25. The test group had undergone a training regimen comprising of yogic exercises (asanas) and breathing exercises (pranayama) for 6 months under the supervision of trained yogic expert. The t-ratio was observed to reach a significant level of confidence (0.1) and along with the mean value of cholesterol during pre tests (153.80) and post tests after six months (142.40). This proposes that yogic asanas and pranayama had a positive significant effect on the reduction of cholesterol levels within females of the age group 18 – 25 years.

After analyzing the difference of cholesterol levels and comparing the control and test group together, it can be concluded that test group saw significant increase in high density cholesterol level and reduction in low density cholesterol level. Overall, this indicates a positive significant difference in cholesterol level of test group after following yogic exercises and pranayama for six months

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