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Effect of Four - Weeks Yogic Training Program on Selected Hematological Parameters among Male Students

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Abstract

The aim of present study was to know the Effect of four - weeks yogic training program on selected Hematological parameters among male students. The training was conducted in the morning session of one hour for the period of four- weeks. The study was conducted on higher secondary school level male students. Total ten male students were be selected as subject. These subjects were selected in terms of purposive samples from the 8th, 9th, 10th, 11th and 12th standards from Senior Secondary Model School Punjabi University Patiala. Two Hematological variables namely Erythrocytes and Leucocytes were selected for the purpose of this research. The results of the study reveals that there was significant effect of four weeks yogic protocol on erythrocytes and leucocytes count among male students.

Keywords: Yogic Training, Hematological, Parameters

Introduction

In human body, blood is integral part of the body. Although blood appears to be red liquid it is actually composed of yellowish liquid called plasma and billions of cells. The vast majority of these cells are red cells and these give blood its red color. Besides the red cells, the blood also contains several types of infection-fighting white cells and tiny cell fragments called platelets which are essential for clotting. Present study was entitled as Effect of four - weeks yogic training program on selected Hematological parameters among male students.

Statement of Problem: Effect of four - weeks yogic training program on selected Hematological parameters among male students.

Methodology and Procedure

Selection of Subjects: The study was conducted on higher secondary school level male students. Total ten male students were be selected as subject. These subjects were selected in terms of purposive samples from the 8th, 9th, 10th, 11th and 12th standards from Senior Secondary Model School Punjabi University Patiala. Two

Selection of Variables

In the light of the expert's opinion, administrative feasibility, availability of subjects, availability of testing equipment and materials, the following Hematological variables were selected for the purpose of this research and are presented in the following table.

Hematological Variables, Tests and Unit of Measurement

S. no	Hematological	Tests	Unit of Measurement	Normal Range
1.	Erythrocytes	Complete Blood Count	m/ μ L (Millions per cubic millimeter of blood)	3.93-5.69 m/ μ L
2.	Leucocytes	Complete Blood Count	K/ μ L (Thousands per cubic milliliter of blood)	3.3-8.7 K/ μ L

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Procedure of blood testing

In this research, four - week yogic training program was applied to subjects. Before and after exercise protocol the Hematological parameters were measured. All blood samples were taken by the lab technician and were examined in a fully computerized clinical laboratory.

Instrument Reliability

The required instruments for blood testing, were taken from the Shubham Computerized Lab, Bir Kauli, Patiala. All instruments were in good condition and had been purchased from the reliable and reputed companies. Their calibrations were tested and found to be accurate enough to serve the purpose of the study.

Schedule of Four - Week Yogic Training Program

The training was conducted in the morning session of one hour for the period of four- weeks. The yoga training was consist of (static and dynamic postures) and Pranayamas (breathing practices).

Statistical Procedure

After the collection of relevant data, to know the effect of four - weeks yogic training program on selected Hematological parameters among male students, t-test was be employed on mean values of pre and post-tests with the help of SPSS 16.0. To test the hypotheses, the significance level was set at 0.05 per cent.

Result

Table 1: Comparison of Mean, SD and t-value for Pre and Post Test of Leukocytes Count in male students at higher secondary school level

Hematological Variable	Group	Pre-Test Mean	Pre-Test SD	Post-Test Mean	Post-Test SD	t-Values
Leukocytes	Experimental	7.43	0.43	7.88	0.45	6.54*

$t_{.05}(9) = 2.26$

The findings of pre and posttest on male students namely Mean, SD and t values for leukocytes count are shown in table no 1. The table statistically reveals that the calculated t value 6.54 for leukocytes count of male students is greater than table value 2.26. Therefore the values of table shows that, during four – weeks yogic training program the leukocytes count increased significantly in male students. The results of table no 1 are also depicted in figure no. 1.

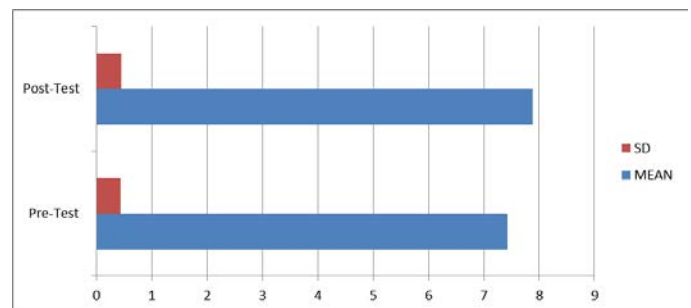


Fig 1: Comparison of Mean, SD and t-value for Pre and Post Test of Leukocytes Count in male students at higher secondary school level

Table 2: Comparison of Mean, SD and t-value for Pre and Post Test of Erythrocytes Count in male students at higher secondary school level

Variable	Group	Pre-Test Mean	Pre-Test SD	Post-Test Mean	Post-Test SD	t-Values
Erythrocytes	Experimental	4.30	0.115	4.413	0.075	4.631*

$t_{.05}(9) = 2.26$

The findings of pre and posttest on male students namely Mean, SD and t values for Erythrocytes count are shown in table no 2. The table statistically reveals that the calculated t value 4.631 for Erythrocytes count of male students is greater than table value that is 2.26. Therefore the values of table no. 2 shows that, during four – weeks yogic training protocol the Erythrocytes level increased significantly in male students. The results of table no 2 are also depicted in figure no. 2

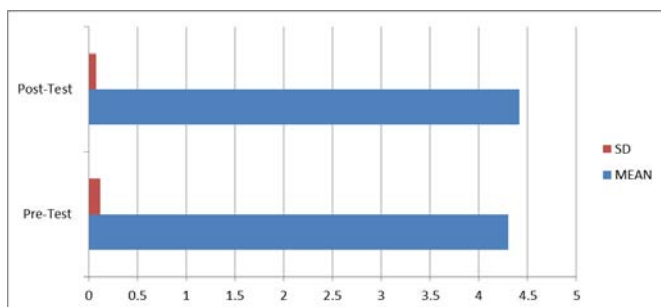


Fig 2: Comparison of Mean and SD values for Pre and Post Test of Erythrocytes Count in male students at higher secondary school level

Based on the statistical analysis of data following findings were drawn by the researcher:

1. The result of the study revealed that leukocyte count increase significantly in male students after the application of four - weeks yogic training protocol. These results of the study confirmed with the findings of who reported significant increase in leukocyte count after twelve week yogic training program.
2. The result of present study proved that erythrocyte count increase significantly in male students due to the application of four - week yogic training protocol. These results of the study confirmed the findings of Akbar Sazvar *et al.* (2012) [1] who also reported that yogic training induced significant change on erythrocyte count.

Discussion of Hypotheses

1. In present investigation, leukocyte count increase significantly in male students after the application of four - weeks yogic training protocol, so the first hypothesis that there will be significant effect of four - weeks yogic training protocol on leukocytes count among male students at higher secondary school level was accepted.

2. It was hypothesized that, there will be significant effect of four - weeks yogic training protocol on erythrocytes count among male students at higher secondary school level. The result of present study proved that erythrocyte count increase significantly in male students due to the application of four - weeks yogic training protocol. So the researcher's second hypothesis was also accepted.

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