

**Impact
Factor
2.147**

ISSN 2349-638x

Reviewed International Journal



**AAYUSHI
INTERNATIONAL
INTERDISCIPLINARY
RESEARCH JOURNAL
(AIIRJ)**

Monthly Publish Journal

VOL-III

ISSUE-II

Feb.

2016

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CHIEF EDITOR – PRAMOD PRAKASHRAO TANDALE

Comparative Study Of Selected Physiological Parameters Of Government And Non-Government School Boys

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Abstract:

The main purpose of the study is to find out some physiological variables of government and non-government school boys. The allied objectives of the study are given: 1) To find out the exhale capacity of government and non-government school boys; 2) To find out the hemoglobin Percentage of government and non-government school boys; 3) To find out the pulse rate of government and non-government school boys. 4) To find out the $VO_{2\text{ Max}}$ of the government and non-government school boys. The present researcher was taken the male subjects (government and non-government school boys) for the study. Government and non-government school boys were taken from state Maharashtra in Amravati District. The 50 Subjects was selected by simple random sampling method. Equipments used for collection of data: Hemoglobin is measured by using shali's Haemometer in gm/100ml, Exhale Capacity is measured by using Peak Flow Meter in Liters and Stethoscope, Pulse rate is measured by placing tip of finger on the radial artery at the wrist, $VO_{2\text{ Max}}$ is measured by pre and post pulse count. The data collected on 50 subjects was Analyzed by Applying 't' test to compare hemoglobin, exhale capacity, pulse rate and Vo2 Max of government and non-government school students. Result: There were insignificant differences obtained in hemoglobin, exhale capacity, pulse rate and Vo2 Max, Government and Non-Government school boys.

Keywords: Physiological Parameters, Government, Non-Government, School Boys

Introduction:

Human Physiology is the study of body function. In physiology we study how our organs, systems, tissues, cells and molecules within cells work and how their function are put together to maintain our internal environment. Physiology is the study of how human body functions. Physiologists study the various characteristic of living things. Their studies range from the most basic unit of organism, the cell, to the more complex organs and organ systems such as the brain and respiratory systems. In physiology we study how different parts of organs of an organism work together to achieve a particular function in our body, for example the digestion of food involves the action of hormones and their chemicals produced by the stomach, liver and pancreas, muscle contraction occur through the action of chemical massages produced by nerves that supply the muscles. If we learn how the body functions normally, then we can understand what happens when organs function abnormally and we can take care of our body. With training and conditioning the heart becomes more efficient and is able to circulate more

blood while bearing less frequently for standard amount of work, the heart beats slowly as the training period proceeds. The heart rate changes indicate a decreasing load on the cardiovascular adaptation to exercise(Singh et.al., 2008).

As physiology mainly focuses on the functions of structures, we cannot discuss physiology without knowing anatomy. Similarly, we cannot understand the anatomy & physiology until and unless we know the composition of human body. The human body consists of atoms of chemical elements such as carbon, hydrogen, nitrogen and oxygen. It also contains smaller amounts of many other elements including, calcium, iron, phosphorus, potassium and sodium. Atoms of chemical elements combine and make thin structures called molecules. Water is the most common molecule in our body. A molecule of water consists of two atoms of hydrogen and one atom of oxygen. Water about 65 percent of our body and most of the chemical reactions that take places in our body require water (Klug, et.al., 1998).

These modifications can be short termed i.e. casting only for the duration if the activity is continued on regular basis. Knowledge of exercise physiology is essential to the practitioners. It is critical that the practitioner understand the effect of exercise on the individual body to plan programmes to achieve the desired outcomes and to maintain the effect of such programme on the individuals (Bucher, et.al., 1987).

The physiological parameters seems to play a very important role in the modern competitive sports in production of more excellent performance, because competitions are organized more frequently than ever the sum sets at a place at a particular time it may rise at other place, moreover because of physiological parameters and difference in time the athletes the same time at another place. It is well known that the individual performance in any sports activities follows diurnal physiological parameters. Pattern method may be derived to condition the athletes to produce peak performance with change in diurnal physiological parameters. Unfortunately little research literature is available on these aspects of sports. Therefore, physiological parameters such as cardio-vascular endurance, vital capacity, heart rate and hemoglobin receive a special consideration and it is an important requisite for outstanding performance in any sports activity.

Statement of Problem:

Comparative Study Of Selected Physiological Parameters Of Government And Non-Government School Boys

Purpose of the Study:

The main purpose of the study is to find out some physiological variables of government and non-government school boys. The allied objectives of the study are given below:

- 1) To find out the exhale capacity of government and non-government school boys.
- 2) To find out the hemoglobin Percentage of government and non-government school boys.

- 3) To find out the pulse rate of government and non-government school boys.
- 4) To find out the $VO_{2\text{ Max}}$ of the government and non-government school boys.

Methodology**Sources of data:**

In present researcher was taken the male subjects (government and non-government school boys) for the study. Government and non-government school boys were taken from state Maharashtra in Amravati District.

Selection of Subject:

The researcher was selected 50 government and non-government school boys from state Maharashtra in Amravati for collection of data.

Sampling Method:

The 50 Subjects was selected by simple random sampling method.

Equipments used for collection of data:

Hemoglobin is measured by using shali's Haemometer in gm/100ml, Exhale Capacity is measured by using Peak Flow Meter in Liters and Stethoscope, Pulse rate is measured by placing tip of finger on the radial artery at the wrist, $VO_{2\text{ Max}}$ is measured by pre and post pulse count.

Analysis of data:**Finding:**

The data collected on 50 subjects was Analyzed by Applying 't' test to compare hemoglobin, exhale capacity, pulse rate and $Vo_2\text{ Max}$ of government and non-government school students.

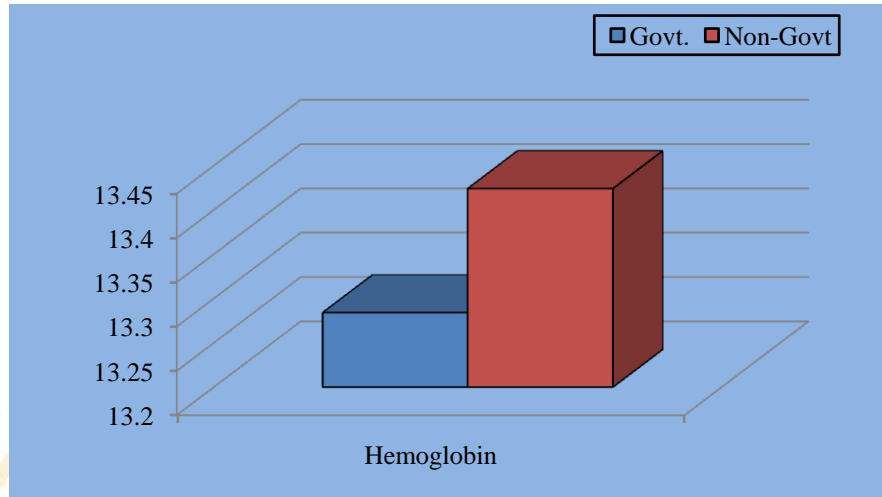
Table-I: Comparison of Scores in hemoglobin of government and non-government school students.

Variables	Group	Number	Mean	SD	SE	MD	t' ratio
Hemoglobin	Govt.	25	13.284	0.423	0.121	0.14	1.153
	Non-Govt.	25	13.424	0.435			

*Significant at .05 level 't'.05 (48) = 2.01

**Govt.= Government school students, Non Govt.= Non-Government school students.

Table-I reveals that there is insignificant difference in hemoglobin between government and non-government school students. The obtained t-value of 1.153 is less than the table value of 2.01.

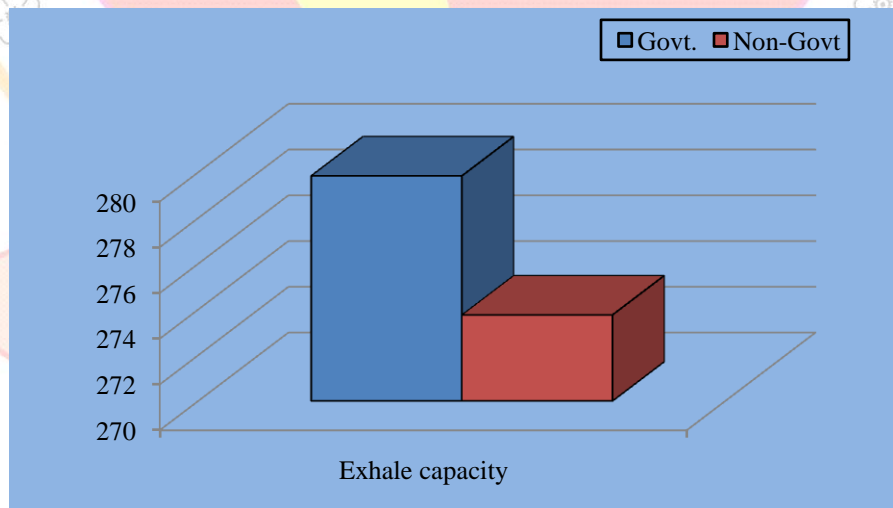


Graph-I: Mean difference of hemoglobin between government and non-government school students.

Table-II: Comparison of Scores in exhale capacity of government and non-government school students.

Variables	Group	Number	Mean	SD	SE	MD	t' ratio
Exhale capacity	Govt.	25	279.84	50.374	13.883	6.08	0.438
	Non-Govt.	25	273.76	47.76			

Table-II reveals that there is insignificant difference in exhale capacity between government and non-government school students. The obtained t-value of 0.438 is less than the table value of 2.01.

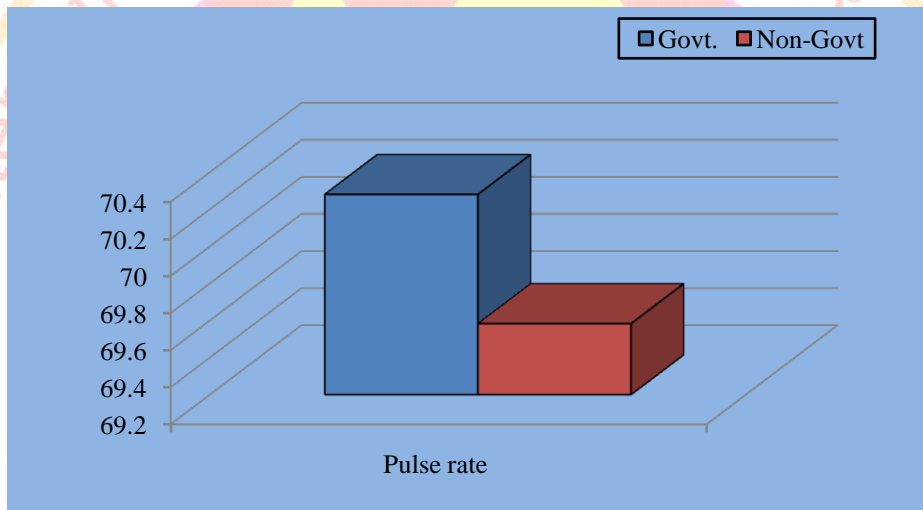


Graph-II: Mean difference of exhale capacity between government and non-government school students.

Table-III: Comparison of Scores in pulse rate of government and non-government school students.

Variables	Group	Number	Mean	SD	SE	MD	t' ratio
Pulse rate	Govt.	25	70.28	2.301	0.621	0.697	1.122
	Non-Govt.	25	69.583	2.083			

Table-III reveals that there is insignificant difference in pulse rate between government and non-government school students. The obtained t-value of 1.122 is less than the table value of 2.01.

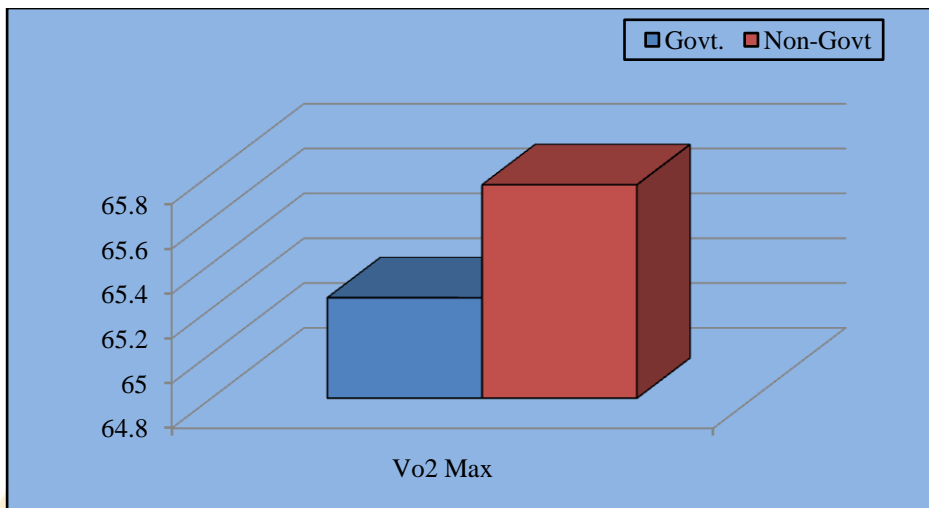


Graph-III: Mean difference of pulse rate between government and non-government school students.

Table-IV: Comparison of Scores in Vo2 Max of government and non-government school students.

Variables	Group	Number	Mean	SD	SE	MD	t' ratio
Vo2 Max	Govt.	25	65.248	1.669	0.47	0.504	1.072
	Non-Govt.	25	65.752	1.654			

Table-IV reveals that there is insignificant difference in Vo2 Max between government and non-government school students. The obtained t-value of 1.072 is less than the table value of 2.01.



Graph-I: Mean difference of Vo2 Max between government and non-government school students.

Conclusion:

In the light of the findings and limitations of the present study the following conclusions were drawn:

There were significant differences of mean in hemoglobin, exhale capacity, pulse rate and Vo2 Max, Government and Non-Government school boys.

There were insignificant differences obtained in hemoglobin, exhale capacity, pulse rate and Vo2 Max, Government and Non-Government school boys.

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