

A COMPARATIVE STUDY OF PHYSIOLOGICAL PARAMETERS OF SPORTS PERSON AND NON-SPORTS PERSONS STUDYING IN SENIOR SECONDARY SCHOOLS OF UTTAR PRADESH STATE IN INDIA

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ABSTRACT

The main purpose of this study was to study the Anthropometric Measurements of Sports Persons and Non-Sports Persons studying in Senior Secondary Schools of Uttar Pradesh State. It was hypothesized that there would be significant difference in the Physiological Parameters of Sports and Non-Sports Students of Secondary School of Uttar Pradesh State. The total number of Sports and Non-sports Students were 3120 i.e. 1560 Sports and 1560 Non-sports students were selected for study. The researcher was used valid and difference types of tools to measure the Physiological Parameters of Sports Person and Non-Sports Persons. The data for the present study will was collected on the score sheets to be prepared for this purpose. After collection the data was treated by appropriate statistical techniques. From the table & Figure it is seen that the Physiological Level of sports persons of Haryana Schools are more than the Non-Sports persons. There were significant differences for this group. There was significant difference for the group. There was significance difference in the Physiological Parameters of Sports Person and Non-Sports Persons.

Keywords: Physiological Parameters, Sports Person, Non-Sports Persons, & Senior Secondary Schools.

INTRODUCTION:

Physical Education succeeding him emphasized the concept of physical education being an integral part of total educational process. In the field of physical education one of the objectives of testing and measuring is to place a proper person in to a proper activity and thus to avoid misfits as far as possible consequently to decide what factor are needed for an activity. Thus there is an attempt to find some types of relationships between the individual and the activity. Anthropometry is the oldest type of body measurements used dating back to the beginning of recorded history. The concepts of the ideal proportion varied of time. Sport consists of preparation and performance-about 99 percent preparations, 1 percent performance. You know the importance of physical fitness in sport, but do you know how to train your athletes to perform at their best? Sport Physiology for Coaches is designed to help coaches assess, refine, enhance,

and improve athletes' performance through an applied approach to exercise physiology. Written primarily for high school coaches this practical, user-friendly text not only covers training essentials for muscular and energy fitness, but it also provides the hands on assessments, forms, and training plans to help you implement the concepts in your training sessions.

OBJECTIVE OF THE STUDY:

The main objective of this study was to compare the Physiological Parameters of sports person and Non-Sports person studying in senior secondary school of Uttar Pradesh State.

HYPOTHESIS OF THE STUDY:

It was hypothesized that there would be significant difference in the Physiological Parameters of Sports and Non-Sports Students studying in senior secondary school of Uttar Pradesh State in India.

SAMPLING METHOD:

The subjects will be selected form the students of senior secondary schools of Uttar Pradesh State by stratified random sampling. The subjects will be selected by 26 school of Lucknow District of Uttar Pradesh State. The selection of subjects and school will be based of stratified random sampling. Three classes form each school and 20 students from each class will be selected. The systematic representation of the sampling will be as $26 \times 3 \times 20 = 1560$.

Selection of the Variable:

There will be three types of variables. Under each variable the following sub-variable will be selected. The details of each type of variables are as follows:

1. Physiological Variables :
 - i. Pulse Rate
 - ii. Hemoglobin
 - iii. Blood Pressure (Systolic)
 - iv. Blood Pressure (Diastolic)

Description of the Test:

Physiological Variable Measurements:

1. Pulse Rate:

Equipment: Stop Watch, Score Sheet.

Test Description : The resting pulse rate on radial artery will be taken early in the morning. The subjects will be tested in supine lying position on the bed. Finger tips were put on radial artery and the pulse rate will be counted for sixty seconds with the help of stop watch.

Scoring : The total number of pulse rate per minute for each subject will be recorded.

2. Hemoglobin Test :

The hemoglobin concentration in gm/100ml. of blood will be tested with the help of Sahils Hemometer.

The Hemoglobin percentage in blood of subject will be measure dby using Sahils Hemometer which is available of Sports Science Research Laboratory. It consists of (1) Sahils Hemometer, (2) Hemoblobin pipette (3) Hemometer, (4) Stirre and (5) Spirit, in Addition to this W/10 HCL., distled water, cotton, needle were also used for estimation of hemoglobin of blood. The hemometer consists fo two tubes. The color of these tubes is used as standard. The hemoglobin pipette has got one graduated. The hemometer tube is quadrate form 2 to 22. The Hemometer tube is filled by W/10 HCL up to the mark 2. This converts hemoglobin in to acid haematin. The colour of the mixture was matched against the standard color of mixture will be matched with the standard colour the lower will be taken out of hemometer.

Scoring : The rending of the hemoglobin scale on ht etube will be read at the lower meniscus of the solution. The scale provide the hemoglobin content in gram/10ml or blood.

3. Blood Pressure (Systolic and Diastolic):

Equipment : Sphygmomanometer

Description of the Test : The instrument consists of a pressure cuff or armlet made of a flat rubber bag covered by the length of rubber tubing to a graduate mercury manometer or an aneroid manometer and by another tube with a pressure bulge or an air pump pressure. A Sphygomanometer and a stethoscope will be used to measure blood be pressure (Systolic and Diastolic) will be taken early in themorning. The subject will be tested in supine lying position on the bed. Ther left upper arm of the subjects will be connected to pressure pumps and manometer. By pumping air the pressure in the bag will be rapidly raised to 200 m. Hg. Which will be sufficient to obliterate dcompletely the brachial artery so that no blood comes through, the radial pulse bisapperared. The pressure will be then lower to a point where the pulse could be felt by using a stethoscope: the pulsation of the brachial heard. At this point the pressure on the dial was considered to be the systolic pressure. The pressure on the bronchial artery was then gradually reduced until the arterial pulse beats could be distinctly heard and the point at which the sound disappeared will be accepted as the diastolic pressure.

Scoring : The systolic and diastolic blood pressure will be recorded in mm. Hg.

Collection of the Data : The data for the present study will be collected on the score sheets to beprepared for this purpose. After collection they will be treated by appropriate statistical techniques.

Table No-1

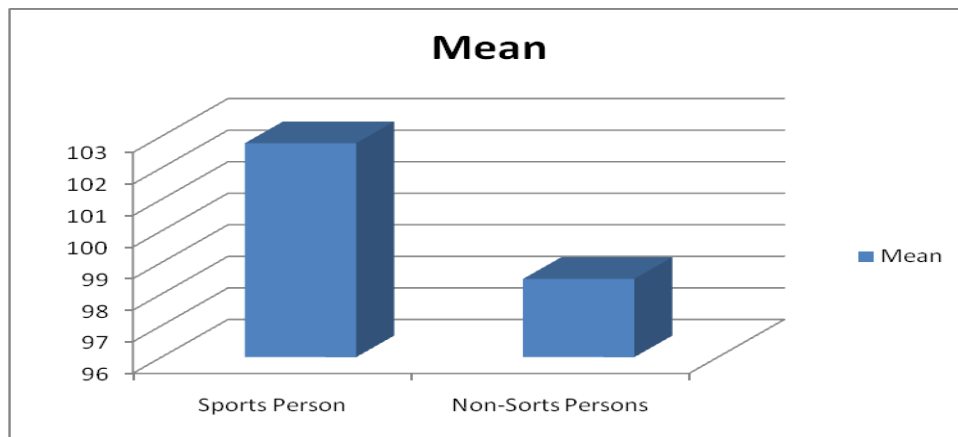
Mean Value & Standard Deviation Value Between Groups of Physiological Score

Group	Mean	Standard Deviation
Sports persons	102, 785	2.07
Non – Sports Persons	98.482	1.42

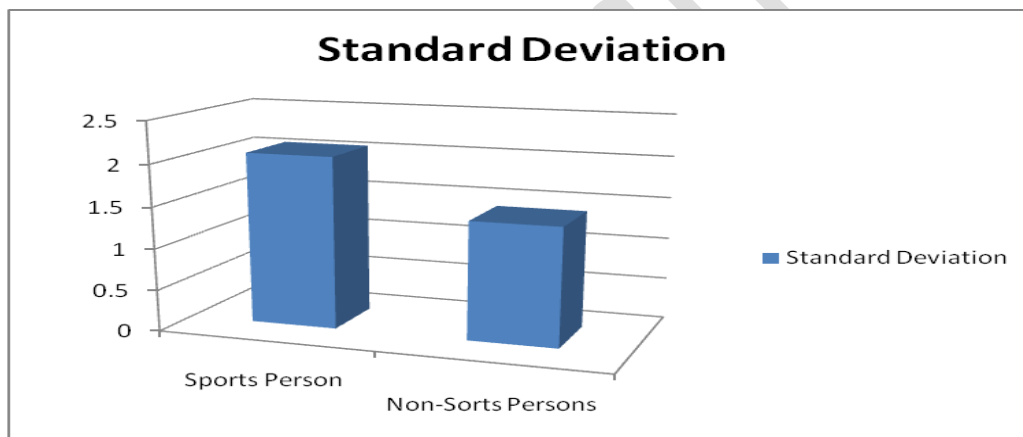
In this table the Physiological Score of Sports persons in greater than Non-Sports persons.

Fig. 1

Mean value between groups of Physiological Score



Standard value between groups of Physiological Score



DISCUSSION OF FINDINGS:

From the table & Figure it was seen that the Physiological Level of Sports Persons of Uttar Pradesh School are more than the Non-Sports Persons. There were significant differences for this group.

Discussion of Hypothesis: It was hypothesized that the relationship of physiological parameters with Anthropometric Measurements, Nutritional Status will be more in case of sports Students that Non-Sports Students.

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