Research Paper Education

A Comparative Study of Physiological Parameters of Sports Person and Non-Sports Persons of Secondary Schools of Haryana

* Bhim Singh

* Research Scholar, Techno Global University, Shilong (Meghalaya)

ABSTRACT

The main purpose of this study was to study the Anthropometric Measurement of Sports Persons and Non-Sports Persons of Secondary School of Haryana. It was hypothesized that there would be significant difference in the Physiological Parameters of Sports and Non-Sports Students of Secondary Schools of Haryana. The study was delimited only to Secondary Schools of Haryana. The study was further being delimited only to male students of Secondary Schools of Haryana. The total number of Sports and Non-Sports Students were 3120 i.e. 1560 Sports and 1560 Non-Sports students were there. 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 are significant differences for this group. There are significant differences for this group. There was significance difference in the Physiological Parameters of Sports Person and Non-Sports Persons. Hence Hypothesis is accepted.

Keywords : Physiological Parameters, Physical Education, Fitness, Blood Pressure,Motivation Technique.

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 mis-fits 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.

A happy child is pride of a nation, children are the world greatest resources let us have a great millennium ahead with reference to the investment of child's developments which would be an investment of a strong and developing nation like our country India.

The rational of a fitness need has been expressed in numerous ways to the public in the past few years. Although fitness must be planned longitudinally for optimum benefit. As Dr. Roy Shepherd a prominent Canadian researcher in physical activity has stated "Physical activity is a learnt behavior" and the earlier the habit is acquired the most likely it is to persist into adult life.

Physiology is the study of function; Human physiology is the study of the function of our bodies. Anatomy is the study of structure; human anatomy is the study of our body structure. Physiology and anatomy go hand and hand, and the study of one subject relates to the study of the other. In this course we will emphasize the study of function, physiology. Much of physiology is how we maintain a constant internal environment. The maintenance of our internal environment is called homeostasis.

Statement of The Problem

A Comparative Study of Physiological Parameters of sports person and non-sports person of secondary school of Haryana. In order to achieve this objective the problem was stated as "A Comparative Study of Physiological Parameters of Sports Person and Non-Sports Persons of Secondary Schools of Haryan Purpose of The Study

The main purpose of this study was to compare the Physiological Parameters of sports person and Non- sports person of secondary school of Haryana.

Significance of The Study

1. The difference on Physiological Parameters of Sports and Non-Sports students of secondary school of Haryana will be known to the school authorities.
2. The school authorities will know the difference on Nutritional Status of sports and non-sports student of secondary schools of Haryana.
3. The suggested Nutritional Practice for the students of secondary schools of Haryana may be proved feasible which may help in building a "Healthy

Students and Healthy Haryana".

Hypothesis

It was hypothesized that there would be significant difference in the Physiological Parameters of Sports and Non-Sports Students of Secondary Schools of Haryana.

Delimitation of the Study

The scope of the present study was delimited to the following aspects:

1. The study was delimited only to Secondary Schools of Haryana.
2. The study was further being delimited only to male stu-

dents of Secondary Schools of Haryana.
3. The total number of Sports and Non-Sports Students were 3120 i.e. 1560 Sports and 1560 Non-Sports students were there.

Limitation of The Study
The present study had the following limitations in it.
1. The Socio-Economic-Status of the students might be different.
2. The present research scholar was unknown about nutritional practices of the players.
3. Research has its limitations, as there may be some bias that may come into the mind of the subject, which may indicate, in sincere responses, which in turn can distort the final result. This was considered as the limitation of the study.
4. The test was administered at different points of time considering the availability of the subjects depending on their tournaments. This also might have affected the responses, which also might be considered as another limitation of the study.
5. No Motivation technique was used by the researcher.
6. The data was collected through test and researcher will be depending on the responses and result given by players.
7. Extracurricular involvement of the subjects will not be considered.
8. The time for conducting the test will be different.

The main purpose of this study is to compare the Physiological Parameters of sports and non-sports persons of secondary schools of Haryana.

Sources of Data
Required data for the presents study will be collected from the sports and nonsports persons of secondary school of Haryana.

Sampling Procedure
The subjects will be selected from the students of secondary schools of Haryana by stratified random sampling. The subjects will be selected by 26 schools of Sirsa District of Haryana state. The selection of subjects and school will be based on stratified random sampling. Three classes from each school and 20 students from each class will be selected. The systematic representation of the sampling will be as 26 x 3 x 20 =1560.

Selection of the Variable
There will be three types of variables. Under each variable the following subvariables 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)

Tools used for Collecting Data
The researcher will use the following apparatus and equipments for collection of data during the tests.
i. Stadiometer to measure the height of the students.
ii. Sphygmomanometer to Blood Pressure (Systolic and Diastolic)
iii. Stethoscope
iv. Hemocylu tube, cotton, needles, stinner, and dropper, chemicals: HCL, spirit, distilled water.

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/100 ml. of blood will be tested with the help of Sahlis Hemometer. The Hemoglobin percentage in blood of subjects will be measured by using Sahlis Hemometer which is available of Sports Science Research Laboratory. It Consists of (1) Sahlis Hemometer, (2Hemoglobin pipette (3) Hemometer, (4) Stirre and (5) Spirit, In Addition to this W/10 HCL, distilled water, cotton, needle were also used for estimation of hemoglobin of blood. The Hemometer consists of two tubes. The color of these tubes is used as standard.

The hemoglobin pipette has got one graduated. The Hemometer tube is quadrate from 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 the tube will be read at the lower meniscus of the solution. The scale provided the hemoglobin content in gram/100ml 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 an indispensable envelope of silk fabrics. The cavity of the bag is connected 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 fitted with an outlet valve. By this means the bag can be inflated to any desired pressure. A Sphygmomanometer and a stethoscope will be used to measure blood pressure (Systolic and Diastolic) will be taken early in the morning. The subjects will be tested in supine lying position on the bed. The 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 mm. Hg. Which will be sufficient to obliterate completely the brachial artery so that no blood comes through, the radial pulse disappeared. The pressure will be then lower to a point where the pulse could be felt by using a stethoscope; the pulsation of the brachial artery at the bed of the elbow could be distinctly heard. At this elbow could be distinctly 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 be prepared for this purpose. After collection they will be treated by appropriate statistical techniques.

Table 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 is greater than Non-Sports persons.

Discussion of Findings
From the table & Figure it is seen that the Physiological Lev-

el of Sports persons of Haryana schools are more than the Non-Sports persons. There are significant differences for this group.

This study's result is also related to last studies. Preetam Amrita (1990) Rani Aruna (2008) Singh Jasvir (2008) Amit Pal (2006) and Amarjit Singh (2008) and Lal Singh (2009).

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.

Hence Hypothesis is accepted.

REFERENCES

Ajmer Singh and S.R. Gangopadhay (1987) Trends and Practices in Physical Education in India (New Delhi : Friends Publication) pp.144 | Arthur S. Daniels and E.A. Davies. (1654) Adapted Physical Education (New York: Harper and Row) pp.24 | Brian J. Sharkey, Steven E. Gaskill (2006) "Sport Physiology for Coaches" Champaign Hillinol | Human kinetics Publishers P.No 112 Bullen, (1971) "Body size and composition of several types of athletes" Journal of sports science. | 6th editions, p.n.75 C.A. Bucher (1960) Foundation of Physical Education (Saint Louis: The C.V.Mosby Company) pp.26 | Delbert Objectified (1951) Physical Education (New York: Harper and Brothers) pp.1 | Deobold B.Vandeln and B.L.Bennet (1971) World History of Physical Education. (Englewood | Cliffs, New Jersey: Prentice Hall Inc.)pp.36 Encyclopedia of Sports Science and Medicine (1971) S.V.Over weight by B.A.Bulletin pp.87 ErajAhmad Khan (1964) History of Physical Education (Patna: Scientific Book Company) pp.3 Gupta Swatantira (2001) "Analysis of performance determining factors in weight lifting" Indian | Journal 5. p.n.33 | H.M.Barrow (1977) Man and Movement (Philadelphia: Lea and Febiger) pp.18 | H.M.Barrow (1979) and R. McGee, A Practical Approach To Measurement in Physical Education | (Philadelphia: Lea and Febiger,) pp.4 | Hirata, (1979) "Physical activity (Human growth and development) "Academic press, New York, | London. P.n.126 | Jackson R. Sharman (1934) Introduction OF Physical Education (New York, A.S.Barnes and | Co.) pp. 50 | Jain Deepak (2003) "Coaching track and field" Khel sahitya Kendra, p.n.37 | James G. Johnston (1980) "Fun in fitness at the Elementary School Level", Research Quarterly, (Vol.46, No. 4, 1980) pp.30 | John Ferguson (2007) "Biology 204: Introduction to Physiology" Biological foundation press. | New York. p.n. 11-17 | K.Sodhi (1952) History of the world (Ancient) Part-II (New Delhi: Vikas Publication) pp.128 | R.B.Froast (1975) Physical Education Practice and principles, (London Addison Wesley Publication Co.) pp.320 | Reet, H.M. and A.K.Uppal (1994)Foundation of physical Education (Baroda: Friends Publication) pp.289 | Womersley (1974) "Practical measurements for evaluation in physical education" 3rd edition. Surjeet parkashan. P.n.76 |