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COMPARISON OF THE SELECTED PHYSIOLOGICAL VARIABLES AMONG THE STUDENTS WHO PARTICIPATE IN GAMES AND THOSE WHO DID NOT

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Abstract : The present study is a comparative analysis of selected physiological variables among students who participated in games and those who did not falling in age of under 19. The purpose of this study was to make a comparative analysis the blood pressure and heart rate of students who participated in games and those who did not. The students have participated at inter school level . To facilitate this study 22 students who participated in games and 22 students who did not were selected from different higher secondary schools were selected via purposive sampling. The data collected was analysed by applying t-test to find out weather there is significant difference between the selected subjects. After analysis via t-test significant differences were found at 0.05 level.

Keywords: Blood pressure and heart rate.

Introduction :

The human body is a stunning machine. As we sit perusing this presentation, endless impeccably planned and incorporated occasions are happening at the same time in our bodies. These occasions permit complex capacities, like hearing, seeing, breathing, and data was handling, to proceed with no cognizant exertion. On the off potential for success that we have up, leave the entryway, and run around the square, practically the entirety of our body's frameworks will be called right into it, empowering us to effectively move from rest to work out. In the event that we proceed with this routine consistently for quite a long time or months and continuously increment the span and force of our running, our body will adjust so we can perform better. Exercise and game physiology have developed from the essential disciplines of life structures and physiology. Life systems is the investigation of a living being's design or morphology. While life systems centers around the essential design of different body parts and their interrelationships, physiology is the investigation of body work. Physiologists concentrate on how the body's organ frameworks, tissues, cells, and the atoms inside cells work and how their capacities are incorporated to manage the body's interior climate, an interaction called homeostasis. Since physiology centers around the elements of body structures, understanding life systems is fundamental for learning physiology. Moreover, both life systems and physiology depend on a functioning information on science, science, physical science, and other essential sciences. The factors of actual schooling understudies are distinctive on the grounds that by the impact of Physical Exercises preparing change in



various frameworks of the body concerning the Physiological components required just as to the pertinent preparing factor. The impacts of actual exercise preparing on different frameworks to understand the subjective changes in the body parts for better execution.

In physiology, we concentrate on how our body organs, frameworks, tissues, cells, and particles inside cells work and how their capacities are assembled to keep up with the global climate. Physiology is the investigation of how the body capacities all in all physiology is the science managing the investigation of human body capacities. It concentrates on the different qualities of living Physiology is the science, which manages the investigation of elements of the body.

Exercise Physiology:

It is the science deals with the study of how the body's functions are altered when we are exposed to exercise a challenge to homeostasis. In other words it is concerned with the body response and the adaptation the exercise of the system at the cellular level.

- Blood pressure: Sphygmomanometer/ blood pressure monitor is used to measure the blood pressure. (mmHg)
- Heart rate: Stethoscope is used to measure the heart rate .(b/m)

2. Methodologies

- 2.1 Subjects: the subjects of the present study are selected mostly from higher secondary schools of Tangmarg area of district Baramulla of age group 16-18 via purposive sampling. The study was carried on 22 boys who participated in inter school games at inter zonal level and 22 boys who did not
- 2.1 Criterion measured : The testing in all selected parameter was done at kunzer stadium and court yard of higher secondary schools at Tarhama, Lalpora, Chandilora, and karwath . All subjects were allowed for few trails to practice the prescribed trails to practice the prescribed tests so that the subjects familiar with the tests to ensure uniform testing conditions.

Blood Pressure:

Purpose: To measure the blood pressure.

Equipment's: Sphygmomanometer, stethoscope.

Sphygmomanometer: The Greek word sphygomo means pulse and metron means measure it is an instrument used to measure arterial pressure.

Stethoscope: It is also known as auscultation, which means the dictation of sounds.

Procedure: The sleeve of the sphygmomanometer is wrapped safely around ideally, the bare upper arm while the patient is sitting in a seat or lying on a bed. The mercury scale is so positioned on an even stage, say a table or any rack close to the patients' arm, where the



inspector can advantageously peruse the development of mercury in the sphygmomanometer. The stethoscope is set on the foremost side of the elbow, the joint of the assessment.

Presently the strain in the sleeve is lifted by siphoning the hand bladder of the sphygmomanometer. To a laible over the normal systolic strain of the patient bent (by and large 160 mm of Hg.) As soon as the mercury arrives at 160 mm on the scale quit siphoning, the inspector extricates the screw to permit the siphoned air to get out leisurely while the is on the stethoscope recipients and eyes on the mercury scale. When the ears pay attention to the primary beat the perusing of the mercury during the last beat listened is recalled and the test proceeded till the beat count is perceptible, (listenable). When the analyst tracks down that the pluses count is not any more discernible, the perusing of the mercury during the last beat listened is recalled. Also, the two readings toward the beginning and toward the finish of tuning in of pulses address the systolic and diastolic circulatory strain e.g., 120/80, and so forth by and large the perusing is estimated twice or threefold. The best perusing is recorded for B.P.

Heart rate:

Purpose: To measure the pulse rate.

Equipment: Stethoscope

Procedure: The procedure to measure the heart rate is the subject is laying position on the bet or setting on chair. The stethoscope is placed on the left side of the chest on the place of heart .The stethoscope is placed for a 1 minute and record the pulse rate while also used a stop watch. it is commonly measured by recording the pulse of radial or carotid artery. It is called the pulse rate.

3.2 Collection of data :For the selected variables of students participating and nonparticipants students ,were giving a chance to practice the prescribed tests so that they should become familiar with tests and know exactly what is to be done.

4. Statistical procedure : Descriptive analysis after that t-test was used to find the differences, if any, among the two groups .

5. Results : Discussions were made on the basis of findings and tables below depict them clearly. The systolic blood pressure of two groups are shown in table 1.1.

VARIABLE	GROUP	Ν	MEAN	SD	t-VALUE
Systolic blood	NPS	22	125.71	6.14	
pressure	PS	22	121.19	5.88	2.41*

Systolic Blood Pressure

• *0.05 level of significance

Table-1.1 (44 students, 22 participting and 22 non-participating students) shows that there is a significant differences between in Mean of participating and non-participating students on



systolic blood pressure. Where Mean of non- participating students is 125.71 and participating students is 121.19 while as standard deviation of non-participating students is 6.14 and participating students is 5.88. The data is analyzed by applying "t -test" the value of t- test is =2.14*

NPS=Non Participating Students.

PS=Participating Students.

Diastolic Blood Pressure :

VARIABLE	GROUP	Ν	MEAN	SD	t-VALUE
Diastolic blood	NPS	22	81.38	6.14	1.74
pressure	PS	22	78.04	7.58	

• *0.05 level of significan

Table: 1.2

Table 1.2 (44 students, 22 participating and 22 non-participating students) shows that there is significant difference between Mean of Non-Participating and Participating Students in Diastolic Blood Pressure. The Mean value NPS is 81.28 and the PS is 78.04. The data is again analyzed by applying "t-test". But before applying "t-test" Standard Deviation was calculated. SD of NPS is 6.14 and SD of PS is 7.58. It was found that there is significant difference in diastolic blood pressure of non physical education students and physical education students, where the t-value is 1.74.

NPS=Non Participating Students.

PS=Participating Student

HEART RATE

VARIABLE	GROUP	Ν	MEAN	SD	t-VALUE
Heart Rate	NPS	22	80.95	9.65	3.85*
	PES	22	70.86	5.95	

*0.05 level of significance

Table: 1.3

Table 1.3 (44 students, 22 participating and 22 non-participating students) shows that there is significant difference between Mean of Non-participating and Participating Students in Heart Rate. The Mean value NPS is 80.95 and the PS is 70.86. The data is again analyzed by applying "t-test". But before applying "t-test" Standard Deviation was calculated. SD of NPS is 9.65 and SD of PS is 5.95. It was found that there is significant difference in diastolic blood pressure of non physical education students and physical education students, where the t-value is 3.85*.



NPES=Non Participating Students.

PES=Participating Students

6. Discussion

Blood pressure:

After collecting data, from both the groups of students and analyze it .The difference has been seen on the graph in the shape of huge building. The graph differentiates that there is a significant difference systolic blood pressure and diastolic blood pressure. This difference has been seen that the participating students has low systolic blood pressure than non- participating students during the physical activity the blood pressure among physical education students is remains high , after sometime or rest state it remains constant than other non-participating students .

At the end, result an exercises increase the cardio -vascular endurance of an individuals. Regular physical activity has been shown to be effective in reducing the relative risks of hyper-tension.

Heart Rate:

After calculating the data, that has been collected from the groups of students that had been analyzed and differentiate a significant difference among the participating students and non-participating students. The most important reason of this significant difference heart rate is physical activity /training among participating students that is the heart rate is low than non-participating students. During the physical training /exercises the heart rate is very high and blood circulation goes quickly. Hence during the period the pulse rate is very high. After resting sometime it remain low in physical education students.

At the end, it is cleared that exercises impacts on both blood circulation as well as cardiovascular functions. Exercises are useful to build healthy body and mind. It also plays important role to minimize the risks related cardic disorders e.g. heart attack, stroke, cardic rest etc.

6.1 Discussion :

At the discussion of this study/ research shows that there is a significant difference among the Physical Education Students and Non- Physical Education Students.

This difference has been shown after comparing the Physiological Variables such as, Blood pressure and Heart Rate among the Participating and Non-Participating Students. These differences are significant .Exercises has vast effect on health. It reduces the risk factors of the health. It decreases hypertension, and decreases heart rate.

Conclusion:



In the conclusion we say that there is a significant difference in physiological variables among participating students and non-participating students. These differences has been seen after comparing the data that has been collected from the two groups. These differences are as mentioned below:

It was seen in table -1.1 that there was a significant difference in systolic blood pressure between the physical education students. As't' value to be significant at 0.05 level.

It was seen in table-1.2 that there was a significant difference in diastolic blood pressure among participating students and non participating students. As 't' value to be significant at 0.05 level.

It was seen in table- 1.3 that there was a significant difference in heart rate among participating students and non participating students. As't' value to be significant at 0.05 level.

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