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## Comparison of physiological variables between students of education and physical education

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### Abstract

Sports are an important aspect of life. They play an important role in the mental, physical, and social development of the nation. The past few decades have seen humans on this field in innovation. Games are increasingly becoming sophisticated technology, with the expansion of educational facilities in the country; they are getting popularity as a separate profession. The field of Sports and Physical Education are international disciplines because they expand international understanding and worldwide brotherhood in present politically conflicting lives. Sport movements are considered as one of the major adhesive forces for developing world peace. The objectives of the study were to study and compare the Physiological variables between the students of Education and Physical Education in Western Uttar Pradesh. The study was delimited to the 600 undergraduate students of Western Uttar Pradesh and further, delimited to physiological variables i.e. Resting pulse rate (RPR), Resting respiratory Rate (RRR), Vital capacity (VC), Blood pressure (BP) and Heart Rate(HR). Before setting the hypothesis the research scholar undergone the related studies in the area of particular subject and consulted experts in this regards. On the basis of their advice & suggestions and the experience of the research scholar it was hypothesized that: There will be a significant difference in physiological variables between the students of Education and Physical Education. The total numbers of 600 subjects (300 each from Education and Physical Education) were selected from 10 different districts of western Uttar Pradesh and further, 30 students from each district of each category were selected. To compare the physiological variables the students of Education and Physical Education, 't-test' was applied.

**Conclusion:** Analysis of the result was found significant differences between the mean scores of education and physical education students in relation to Resting pulse rate, Resting respiratory rate, Vital capacity, Diastolic Blood pressure, Systolic Blood Pressure and Heart rate as their t-value was found 19.015, 5.232, 9.088, 18.790, 22.169 and 10.150 which were higher value than the required value at .05 level of significance. The result of the study also showed that all parameters of physiological variables i.e. i.e. Resting pulse rate, Resting respiratory rate, Vital capacity, Blood pressure and Heart rate of Physical Education Students were found greater than Education students of Western Uttar Pradesh.

**Keywords:** Physiological Variables, Education students and Physical Education students.

### Introduction

Sports are an important aspect of life. They play an important role in the mental, physical, and social development of the nation. The past few decades have seen humans on this field in innovation. Games are increasingly becoming sophisticated technology, with the expansion of educational facilities in the country; they are getting popularity as a separate profession. More youths are participating in sports as a daily specialty of their lives. Participation in sports and physical fitness enhances a discipline and social harmony.

Sports are no longer just sports. Sports become big industry worldwide. The sudden increase in signing on the product by internationally renowned sportsman and Prize Money has made sports, big business. Famous sportsmen are not following system of thinking high and living low and Sports fan all over the world are happy for that. Now a day's sports become integral part of our society. It's being controlled and does control all our social institution like, art, economics, education, politics, law, international relations and mass-communication. In fact, its scope is awesome.

The performance of sportsmen in sports does not depend only on physical fitness components, but many other factors also contribute to its success, such as training schedule, clothing, scientific and quality of equipment, balanced diet and competition frequency psychological

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Preparation. All these factors together make the athlete ready for the competition. Apart from all of them, he should develop motor fitness. Research findings suggest that the high level of technology alone cannot be successful in competitive sports.

Regular physical activity among the children is vital for normal growth. It also improves the respiratory system anaerobic capacity. It's furthermore necessary for fitness elements and muscle strength. Its constructive influence can be seen after a long period on connective tissues, bones strength and joints. From a psychological perspective, physical activity inspires learning self-respect and new movement skills.

### Statement of the problem

The purpose of the Research is to compare the physiological variables between students of Education and Physical Education.

### Objectives of the study

The objectives of the study were to study and compare the physiological variables between students of Education and Physical Education in Western Uttar Pradesh

### Delimitations

The study was delimited to the 600 undergraduate students of Western Uttar Pradesh and further, delimited to physiological variables i.e. Resting pulse rate (RPR), Resting respiratory Rate (RRR), Vital capacity (VC), Blood pressure (BP) and Heart Rate(HR).

### Limitations

The dietary habits, geographical conditions and their socioeconomic background of the subjects might have affected the result of this study, hence considered as limitation of the study.

### Hypothesis

Based the available review literature, expert advice & suggestions and own understanding of researcher, it was

hypothesized that: there will be a significant difference in physiological variables i.e. Resting pulse rate, Resting respiratory rate, Vital capacity, Blood pressure and Heart rate between the students of Education and Physical Education.

### Selection of subject

The total numbers of 600 subjects (300 each from Education and Physical Education) were selected from 10 different districts of western Uttar Pradesh and further, 30 students from each district of each category were selected.

### Selection of variables and criterion measures

To compare the physiological variables between students of education and physical education, i.e. resting pulse rate, Resting respiratory rate, Vital capacity, Blood pressure and Heart rate were considered as research variables. Resting pulse rate, Resting respiratory rate, Vital capacity, Blood pressure and Heart rate were measured in number of pulse per minute, number of breath per minute, millimeter, millimeter of mercury and number of beats per minute respectively.

### Testers competency

Test-retest method was employed on 10 subjects on two different days before taking the final data of all the subjects for assessing tester's competency.

### Collection of data

The data for the study were collected from the 600 undergraduate students (300 each from Education and Physical education) who were selected from the government, semi-government or private colleges of ten Districts of Western Uttar Pradesh.

### Statistical technique

To compare physiological variables between students of Education and Physical Education, 't-test' was applied.

### Findings of the study

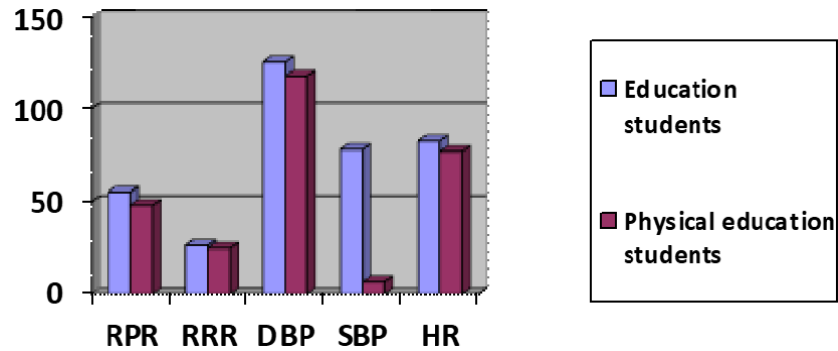
**Table 1:** Comparison of physiological variables between Students of Education and Physical Education

Variable		Education Students	Physical Education Students	t-ratio
Resting Pulse Rate (RPR)	Mean	55.17	47.83	19.015*
	S.D	5.50	3.80	
Resting Respiratory Rate (RRR)	Mean	26.20	24.71	5.232*
	S.D	3.71	3.22	
Vital Capacity (VC)	Mean	3076.43	3433.40	-9.088*
	S.D	515.84	443.63	
Diastolic Blood Pressure (DBP)	Mean	125.50	117.69	18.790*
	S.D	5.001	5.178	
Systolic Blood Pressure (SBP)	Mean	77.93	69.47	22.169*
	S.D	3.45	5.64	
Heart Rate (HR)	Mean	82.60	76.78	10.150*
	S.D	6.60	7.73	

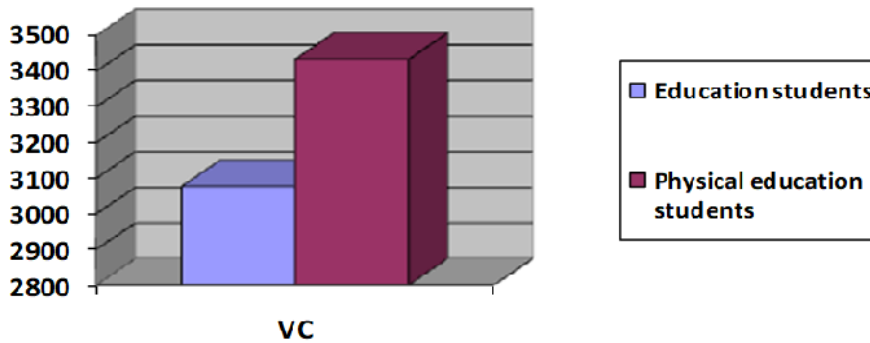
\*Significant at.05 level, t-value required to be significant at 599 df =1.960

It is evident from table-1 that significant difference was found between the mean scores of education and physical education students in relation to physiological variables i.e. Resting pulse rate, Resting respiratory rate, Vital capacity, Diastolic Blood pressure, Systolic Blood pressure and Heart rate as

their t-value was found 19.015, 5.232, 9.088, 18.790, 22.169 and 10.150 which were higher value than the required value at.05 level of significance. It shows that the physiological variables of physical education students were found better than Education students of Western Uttar Pradesh.



**Fig 1.1:** Graphical Representation of comparison of physiological variables (RPR, RRR, DBP, SBP, HR) between students of Education and Physical Education



**Fig 1.2:** Graphical Representation of comparison of physiological variable (VC) between students of Education and Physical Education

**Conclusion**

Analysis of the result was found significant differences between the mean scores of education and physical education students in relation to Resting pulse rate, Resting respiratory rate, Vital capacity, Diastolic Blood pressure, Systolic Blood Pressure and Heart rate as their t-value was found 19.015, 5.232, 9.088, 18.790, 22.169 and 10.150 which were higher value than the required value at .05 level of significance. The result of the study also showed that all parameters of physiological variables i.e. i.e. Resting pulse rate, Resting respiratory rate, Vital capacity, Blood pressure and Heart rate of Physical Education Students were found greater than Education students of Western Uttar Pradesh.

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