



A STUDY OF SELECTED PHYSIOLOGICAL VARIABLES BETWEEN ATHLETES AND NON-ATHLETES



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ABSTRACT

The purpose of the present study was to find out the Comparison of Selected Physiological Variables between Athletes and Non-Athletes. Eighty Athletes and Non-Athletes were selected purposively from four schools ranging from 11 to 14 years of age of Nagpur City were selected as subjects for this study. In the present study Pulse rate was measured manually for 1 minute and the score was recorded. Systolic and diastolic blood pressures were measured by using sphygmomanometer and stethoscope and the score was recorded in mmHg. The data of the selected variables were analysed through Statistical procedure by using Independent 't' test and also the level of significance for the present study was set at .05 levels which was found to be appropriate enough for the study. From the result of the study it was found that Athletes showed significantly better in Physiological variables as compared to Non-Athletes.

KEY WORDS: Physiological Variables, Athletes and Non-Athletes

Introduction

Human body is a gift by nature. Life in the computer age is not less than the blessings of God. Scientific discoveries have changed the entire face of our planet. It has changed the entire face of our planet. It has changed the thorny life into the bed of roses. Good health provides sound and solid foundation on which fitness rests and at the same time fitness provides one of the most important key to health and living one's life to fullest.

Same is the case with games and sports in rural and urban settings. We notice that there is a lot of difference in the interest of children. Like we observe that in rural areas children are indulging in minor, indigenous activities and field games like football, kabaddi, kho-kho, hockey, wrestling, athletics etc. whereas, in urban we find children playing basketball, swimming, badminton, tennis, squash, golf etc. The main cause of difference is the availability of facilities and financial support of parents.

Physiological factors also play a dominant role in addition to the physical fitness for best sports performance. Each sport required a predominant physiological quality which helps to win competitions. Though numbers of studies have been undertaken on physiological factors but no attempt has been made to find out a comparative study on selected physiological variables between Athletes and Non-Athletes. The purpose of the present study was to find out the Comparison of Selected Physiological Variables between the Athletes and Non-Athletes.

Material and Methods

Eighty Athletes and Non-Athletes were selected purposively from four schools ranging from 11 to 14 years of age of Nagpur City were selected as subjects for this study. The research was a descriptive comparative method. In the present study Pulse rate was measured manually for 1 minute and the score was recorded. Systolic and diastolic blood pressures were measured by using

sphygmomanometer and stethoscope and the score was recorded in mmHg. The data of the selected variables were analysed through Statistical procedure by using Independent 't' test and also the level of significance for the present study was set at 0.05 levels which was found to be the appropriate enough for the study.

Results

Table-02

Comparative analysis of selected Physiological variables between Athletes and Non-Athletes

Group	Number	Mean	S.D	't' Value
Pulse Rate	Non Athletes	91.7	8.93	4.30*
	Athletes	84.94	7.06	
Systolic blood pressure	Non Athletes	115.67	6.97	3.49*
	Athletes	112.57	8.93	
Diastolic blood pressure	Non Athletes	76.2	4.88	3.32*
	Athletes	75.2	6.25	

The data provided compares the physiological characteristics (pulse rate, systolic blood pressure, and diastolic blood pressure) of two groups: Non-Athletes and Athletes. The analysis is based on the mean, standard deviation (S.D.), and the 't' value for each characteristic.

Interpretation of Results:

1. Pulse Rate:

- Non-Athletes: Mean = 91.7, S.D. = 8.93
- Athletes: Mean = 84.94, S.D. = 7.06
- 't' Value = 4.30:*
 - The pulse rate of athletes is significantly lower than that of non-athletes.
 - This is likely due to better cardiovascular efficiency in athletes.

2. Systolic Blood Pressure:

- Non-Athletes: Mean = 115.67, S.D. = 6.97
- Athletes: Mean = 112.57, S.D. = 8.93
- 't' Value = 3.49:*

- Athletes have significantly lower systolic blood pressure compared to non-athletes.
- Indicates better heart and vascular function in athletes.

3. Diastolic Blood Pressure:

- Non-Athletes: Mean = 76.2, S.D. = 4.88
- Athletes: Mean = 75.2, S.D. = 6.25
- 't' Value = 3.32:*
 - Athletes have slightly lower diastolic blood pressure than non-athletes.
 - The difference is statistically significant, suggesting better vascular relaxation in athletes.

Findings and Conclusion

In the present study there was significant difference observed between the Athletes and Non Athletes in all the selected physiological components. The analysis of results indicates a high level of better physiological efficiency in the group of the examined Athletes as compared to Non Athletes. Across all three measures, athletes exhibit significantly better physiological parameters compared to non-athletes. These differences likely reflect the positive effects of regular physical training on cardiovascular

The results of the 't' value showed significant Differences in Pulse rate, Systolic and diastolic blood pressures Components between Athletes and Non Athletes. The Athletes were found superior and stronger than their counterparts.

In conclusion the results of the present study Confirm that Athletes are comparatively better than Non Athletes in selected physiologically. Athletes are superior to Non Athletes in Pulse rate, Systolic blood pressure Diastolic blood pressure etc. This shows that regular energetic activity produces physiological fitness improvements.

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