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## A comparative study of physical fitness components of athletes and non-athletes in S.R.T.M. University Nanaded

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### Abstract

The purpose of the study was a comparative study of physical fitness components of athletes and non-athletes in S.R.T.M. University Maharashtra. This study examines the 20 athlete and 20 non-athlete students for their study in said University. Both the groups the athlete group and non-athlete group were selected randomly. The physical variables were taken pull-ups for arm strength, Bent knee sit-ups for muscle strength and shuttle run-Agility. To analyse the data the 't' test was employed on the ratio of 0.05 level of significance. On the basis of the findings the following conclusions are drawn. There is found a significant mean difference of athletes in bent knee sit-ups as compared to non-athletes and there is also found not significant difference in pull-ups and shuttle run between athletes and non-athletes. On the whole this study shows that athlete students due to their regular practice have better physical fitness than the non-athlete students.

**Keywords:** Physical fitness, athletes, non-athletes

### Introduction

Throughout the world fitness movement has grown in size and it gives special importance to youth. Increasingly, the medical profession generally agrees that proper exercise is highly desired as an integral part of maintaining health is for more enjoyable than trying to regain it. Physical fitness is a state of health and wellbeing and more specifically aspects of sports, the ability to perform aspects of sports occupation and daily activities. Before the industrial revolution fitness was defined as the capacity to carry out the day's activities without undue fatigue. Physical fitness is considered a measure of the body's ability to function efficiently and effectively in work and leisure activities and remain healthy. As stated earlier, it is generally accepted fact that a sound mind lies in a sound body. Fitness is not a thing to be achieved without any effort. A wholehearted and sincere effort is needed to obtain it.

Clarke 1995 says "Life is a struggle, a school a test of fitness, no struggle no school, no fitness, no future in this or any other world" A weak child is a weak brick in the wall of a nation. To-day's child is tomorrow's citizen in whose hands the fate and prosperity of the nation lie. If a child is weak and he is considered liability not only to himself and to his family, but also to the entire nation. The wealth of a nation depends entirely upon the health of every citizen of the country. Fitness is a desirable state for everyone who wants to lead a tasteful and productive life and realise his fullest potential.

**Bent knee sit ups:** sit-ups are one of the traditional forms of abdominal training. When performed correctly, a sit-up tones and strengthens your abdominal and oblique muscle. Bent-knee sit-ups, also called crunches.

**Pull-ups:** pull-ups are one of the best strength and mass building exercises out there and you do not even need gym.

**Shuttle Run:** Shuttle run are a popular training technique for sports which involve short bursts of speed. They help develop your acceleration, speed and your anaerobic fitness.

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### Material and Methods

The purpose of the present study was to identify the physical components between athletes and non-athlete. The study was carried out with a simple of 40 school students. The students were selected randomly and divided into two group's athletes and non-athletes. The athlete group were given training for four weeks in a month. The athlete group were given training programme was compressed general warming up exercises and some specific exercise like, jogging, slow running and fast running. After the completion of four weeks training programme, the test was conducted on all the 40 subjects. The test was administered to the subjects in the morning session. For the effective administration of test all the subjects were briefed about the purpose of the study and then the data was collected. For analysing the data the 't' test was employed on the ratio of 0.05 level of significance.

### Interpretation of Data

The mean difference of athletes and non-athletes in shuttle run, pull ups and bent knee, sit up;

**Table 1:** Statistical Comparison of pull-ups between Athlete and non-Athlete students

Group	Mean*	SD*	T-ratio
Athlete	6	3.50	1.73
Non-Athlete	4.4	2.26	

N=20 Significant at. 05 level

From the above table it is observed that the mean of athlete students is 6 and non-athlete students are 4.4. After applying "t" test it is found that the t-ratio is 1.73 and the tabulated value at. 05 level is 2.042 that is statically not significant. Thus there may not found any significant difference in athlete and non-athlete students in pull-ups.

**Table 2:** Statistical comparison of Bent Knee sit-ups between Athlete and non-Athlete students

Group	Mean*	SD*	T-ratio
Athlete	23.85	5.50	3.55
Non-Athlete	30.85	6.93	

N=20 Significant at. 05 level

From the above table it is observed that the mean of athlete students is 23.5 and non-athlete students are 30.85. After applying "t" it is found that the t ratio is 3.55 and a tabulated value at. 05 level is 2.042. Hence it indicates that significant difference found between athletes and non-athletes.

**Table 3:** Statistical comparison of shuttle run between Athlete and non-Athlete students

Group	Mean*	SD*	T-ratio
Athlete	12.03	1.19	0.56
Non-Athlete	12.25	1.30	

N=20 Significant at.05 level

From the above table it is observed that the mean of athlete students is 12.03 and the mean of non-athlete students are 12.25. After applying "t" it is found that the t ratio is 0.56 and the level of significance is 0.05 that is statistically not significant. Thus there found no significant difference between athletes and non-athletes in shuttle run.

### Conclusion

1. There is found a significant mean difference between athletes and non-athletes in bent knee sit-ups

2. There is also found not significant mean difference between athletes and non-athletes in pull ups.
3. There is also found not significant difference between athletes and non-athletes in shuttle run.

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