



A comparison of the physical abilities of athletes and non-athletes

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Abstract:

A study comparing the explosive strength, dynamic muscular endurance, and agility of athletes and non-athletes found a significant difference. Athletes have greater explosive strength, dynamic muscular endurance, and agility, possibly due to their athletic training. This results in better explosive strength, dynamic muscular endurance, and agility compared to non-athletes. Additionally, athletes exhibit improved explosive strength, dynamic muscular endurance, and agility, enabling them to perform complex movements with ease. These findings emphasize the positive effects of regular physical activity on overall fitness and the benefits athletes can achieve in terms of their physical abilities.

Keywords: Physical abilities, athletes

Introduction

Just as the living being and creation are connected, so the body and the mind are connected, as if the body is unwell, then the person is unable to do the work he is supposed to do. In the same way, the internal organs of the body are coordinated, if any one of them fails or does not function properly, the whole effect is affected by that organ. A person who is physically fit combines their ability to engage in strenuous physical activities and perform well. In other words, we might argue that the entire operating system alludes to the body's physical health and maximal potential. Every time we move forward, we exercise, maintain the health of your body, and follow this order. The human body is built in such a manner that it can bend, stretch, run, climb, and perform laborious tasks. When it comes to the body, a larger frame with more active involvement and powerful muscles is crucial. Any labor or exercise we perform improves our health, increases our vitality, and strengthens our degree of survivability.

Today's time is a rush, everyone is in a rush to live. Although man is an animal, he is always inclined to find his way something different. But in all these things, how to preserve one's own self-interest, a new problem is still in front of man. For that, first of all, it is necessary to stay healthy. The same is true of children in school or education. Mental preparation for the whole day was



followed by physical preparation and only then the real struggle began. Since the body is not strong, there is no mind in studying. The researcher has chosen this topic to find out whether it is related to the physical ability of the children who are smart in studies or how the physical ability of the students who are physically active, or participate in sports.

Methodology:

The subjects for this research were chosen from Nagpur city athletes who competed at the district level in several sports, together with non-athletes who were enrolled in the same classes as them. The Under-19 team, which consisted of 20 athletes and 20 non-athletes, produced the chosen players. The researcher initially chose individuals for the study who had received great grades in their class but had not taken part in any athletic activity. To assess athletes and pupils with high attributes, physical skills like explosive strength, dynamic muscular endurance, and agility were chosen. explosive strength was assessed using Sergeant Chalk Jump, dynamic muscular endurance was assessed using a pushups, and agility was assessed using a 6 X 10 Meters Shuttle Run.

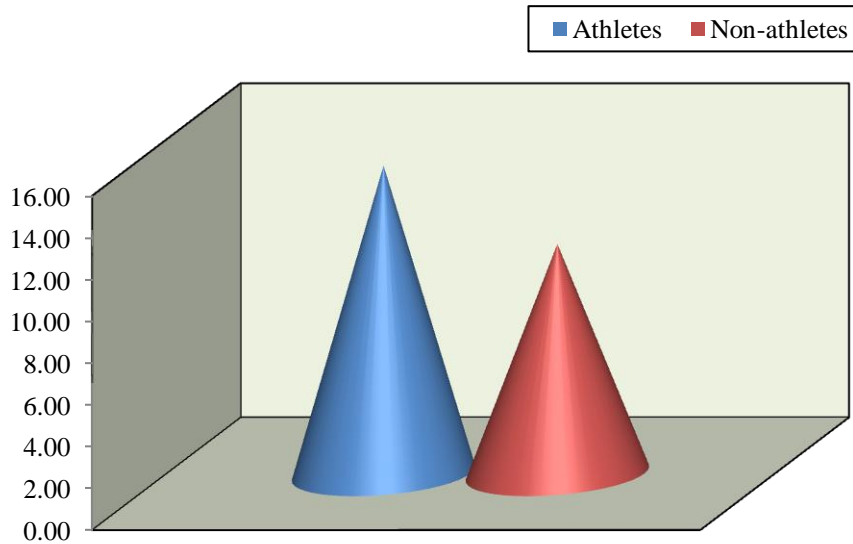
Statistical Analysis:

In order to determine if there was a statistically significant difference between athletic and non-athletic school children, the gathered data on chosen criteria variables were statistically evaluated using independent 't' ratios. To test for significance in each case, a confidence level of 0.05 was used, which was deemed suitable.

Table-1: Comparison between Athletes and non-athletes students in explosive strength (in Inches)

Groups	N	Mean	SD	SE	MD	Ot	df	Tt
Athletes	20	14.75	5.12	1.30	3.75	2.89	38	2.02
Non-athletes	20	11.00	2.71					

The average, standard deviation, and "t" ratio of explosive strength among students from athletes and non-athletes are shown in Table No. 1. For athletes, the means and standard deviations were 14.75 ± 5.12 and for non-athletes, 11.00 ± 2.71 . For degrees of freedom 38, the computed 't' ratio of 2.89 is higher than the necessary table value of 2.02. The study's results revealed a significant difference between students who were athletes and non-athletes in terms of explosive strength.

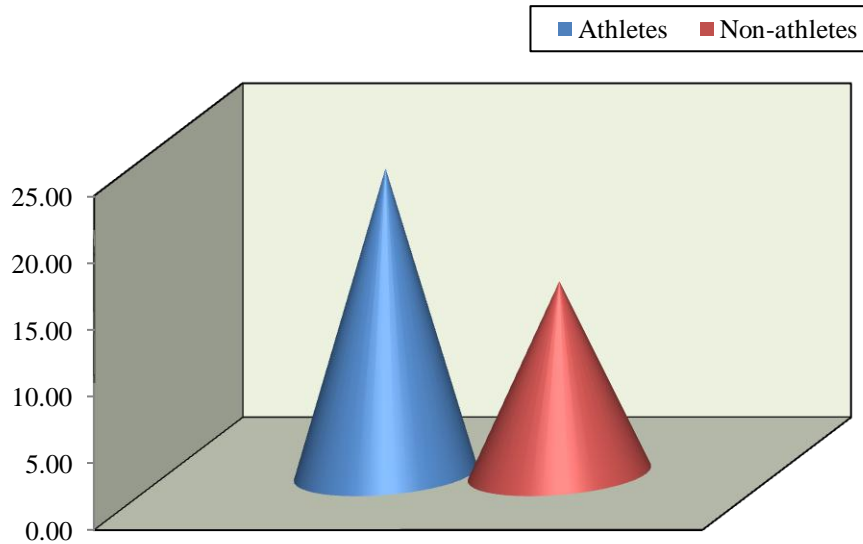


Graph-1: Mean Scores of explosive strength (in Inches) between Athletes and non-athletes students

Table-2: Comparison between Athletes and non-athletes students in dynamic muscular endurance (in Numbers)

Groups	N	Mean	SD	SE	MD	Ot	df	Tt
Athletes	20	22.85	4.28	1.43	8.45	5.92	38	2.02
Non-athletes	20	14.40	4.73					

The average, standard deviation, and "t" ratio of dynamic muscular endurance among students from athletes and non-athletes are shown in Table No. 2. For athletes, the means and standard deviations were 22.85 ± 4.28 and for non-athletes, 14.40 ± 4.73 . For degrees of freedom 38, the computed 't' ratio of 5.92 is higher than the necessary table value of 2.02. The study's results revealed a significant difference between students who were athletes and non-athletes in terms of dynamic muscular endurance.

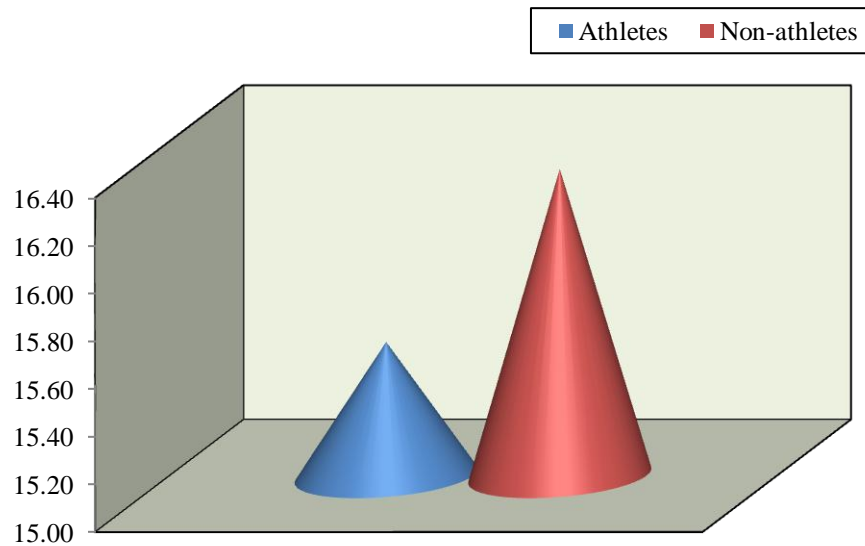


Graph-2: Mean Scores of dynamic muscular endurance between Athletes and non-athletes students

Table-3: Comparison between Athletes and non-athletes students in agility (in Seconds).

Groups	N	Mean	SD	SE	MD	Ot	df	Tt
Athletes	20	15.56	0.68	0.26	0.72	2.79	38	2.02
Non-athletes	20	16.29	0.94					

The average, standard deviation, and "t" ratio of agility among students from athletes and non-athletes are shown in Table No. 3. For athletes, the means and standard deviations were 15.56 ± 0.68 and for non-athletes, 16.29 ± 0.94 . For degrees of freedom 38, the computed 't' ratio of 2.79 is higher than the necessary table value of 2.02. The study's results revealed a significant difference between students who were athletes and non-athletes in terms of agility.



Graph-3: Mean Scores of agility between Athletes and non-athletes students

Conclusion:

Comparing the explosive strength, dynamic muscular endurance and agility of athlete and non-athlete students, it was concluded that there is a significant difference between the explosive strength, dynamic muscular endurance and agility of athletes and non-athletes, in which the explosive strength, dynamic endurance and agility of athletes Muscular endurance and agility have been found to be greater, which may be due to the fact that athletes undergo athletic training for physical development, which results in athletes demonstrating better strength, speed, and endurance than their non-athlete counterparts. Additionally, athletes demonstrate improved explosive strength, dynamic muscular endurance and agility, allowing them to perform complex movements with ease. These findings highlight the positive effects of regular physical activity on overall physical fitness and the benefits that athletes can have in terms of their physical abilities.

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