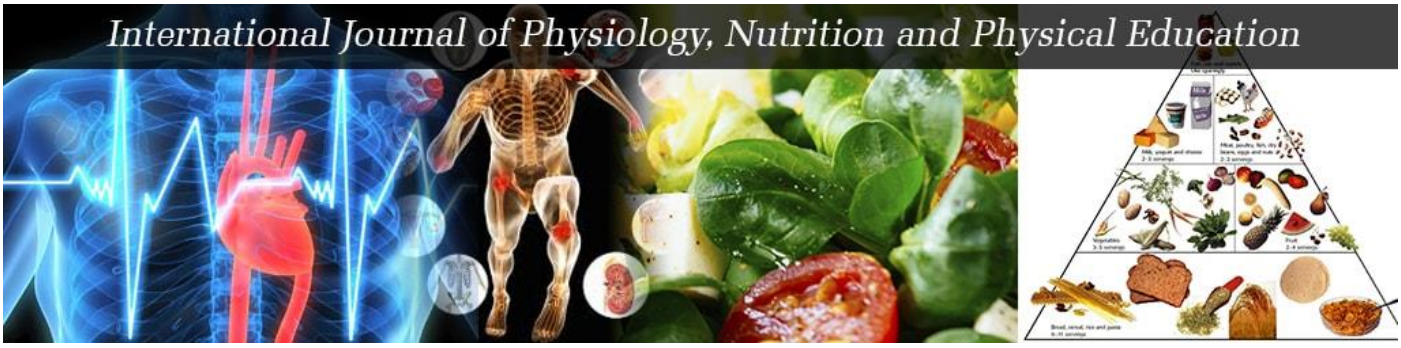

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Muscular endurance among high aerobic capacity and low aerobic capacity sportspersons: A comparative study

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Abstract
For every person to some extent, physical fitness now a day has become an essential requirement to stay fit, so that in the future they can't face a miserable life with lots of health issues. Muscular endurance is one of the components of physical fitness needed for an athlete performance especially in endurance based sports. It helps to enhance the cardiovascular fitness of muscles. Muscular endurance helps in maintaining the stability of a good posture. The aim of this study was to examine the muscular endurance, among high aerobic capacity and low aerobic capacity sportspersons which were selected from Government Degree Colleges of Kashmir division. For the present study, test used to measure the muscular endurance of the sportspersons of both groups was Sit-Ups. For the present study, 200 sportspersons (100 from high aerobic capacity and 100 from low aerobic capacity sportspersons' group) were selected, from Government Degree Colleges of Kashmir division, through purposive sampling. Age of the sportspersons of both the groups was selected between 18 to 25 years. To discover the level of muscular endurance between high aerobic capacity sportspersons and low aerobic capacity sportspersons, 't' test was applied, at 0.05 level of Significance. The mean value of high aerobic capacity sportspersons group and low aerobic capacity sportspersons group in relation to Muscular endurance was (41.97#34.92), while as the standard deviation of high aerobic capacity group and low aerobic capacity group in relation to Muscular endurance was (6.521#7.008), respectively. Calculated t–ratio was found 7.36, which was greater than the tabulated t (1.972). The result showed that there was a significant difference, in muscular endurance level between high aerobic capacity and low aerobic capacity sportspersons. Therefore, the hypothesis given earlier was accepted.

Keywords: muscular endurance, bent knee sit-ups, aerobic capacity and sportsperson

Introduction
To some extent, physical fitness now a day has become an essential requirement for every person to stay fit, so that in the future they can't face a miserable life with lots of health issues. It is especially need for each sportsperson with respect to their sport/game. Physical fitness is a necessity for all the human beings to live a happy and healthy life. Muscular endurance is one of the components of physical fitness, necessary for an athletic performance especially in endurance based sports. It helps to enhance the cardiovascular fitness of muscles. Through the muscular endurance, we increase our ability to do all the daily activities of our home with ease. Muscular endurance helps in maintaining the stability of a good posture. To reduce the risk of injuries, an athlete should be strong with respect to muscular endurance. Muscular endurance training helps in maintaining the body weight, increases energy level in the body and leads to a better sleep. Good muscular endurance resulted in strong and healthy bones and muscles. As we know, many sports/games need a much more muscular endurance, which includes rowing, swimming, football, cross country, cycling, wrestling, ice skating etc. During the play, a sportsman face fatigue of the muscles, but sportsmen with a good muscular endurance face this fatigue with ease. Hence, muscular endurance has become a necessary condition for certain sport/game players to perform well in the competitions. There are many exercises, which help in improving the muscular endurance are Plank, Sit-ups, Burpees, Body weight squats, Light barbell cycling, Walking lunges, Cycling, Push-ups and so on.

Material and Methods

The researcher collected the data on two hundred (200) sportspersons (100 high aerobic capacity sportspersons and 100 low aerobic capacity sportspersons) from three Government Degree Colleges of Kashmir division affiliated to the University of Kashmir. The age of these sportspersons was fixed at 18 ± 25 years. For the selection of these sportspersons of high aerobic capacity sportspersons group and low aerobic capacity sportspersons group, the sportspersons were tested through Harvard Step Test. After the result from Harvard step test, the sportspersons who fall in the high and low category of aerobic fitness were taken for the further study. The students, who came down between high and low category (average), were not included for the further study. For his collection of data, the researcher applied purposive sampling method. Sit-ups test was used for measuring muscular endurance of both the groups in the research. The data was analysed by using descriptive and t test.

Results and Finding

Table 1: Muscular endurance among high aerobic capacity and low aerobic capacity sportspersons

Variable	Group	N	Mean	Standard deviation	T- ratio
Muscular Endurance	High Aerobic Capacity Sportspersons	100	41.97	6.521	7.36
	Low Aerobic Capacity Sportspersons	100	34.92	7.008	

As given in the above table, the mean value and standard deviation of high aerobic capacity sportspersons group in relation to their Muscular endurance was (41.97#6.521) while as, mean value and standard deviation of low aerobic capacity sportspersons group in relation to their Muscular endurance was (34.92#7.008), respectively. Calculated t–ratio was found 7.36 which were greater than the tabulated t (1.972).

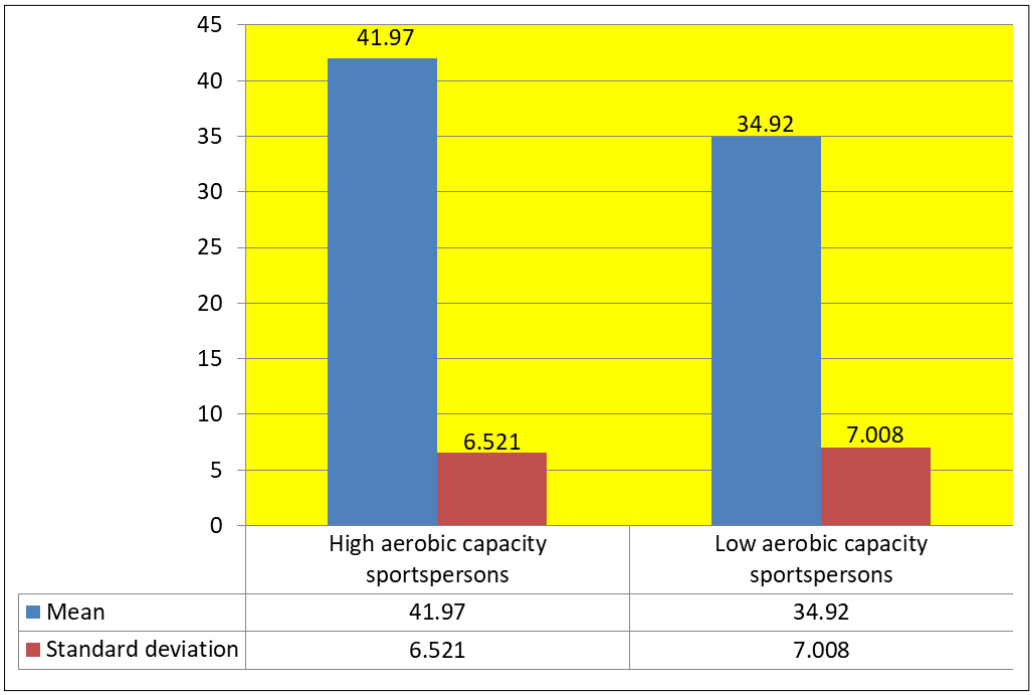

Fig 1: Muscular endurance among high aerobic capacity and low aerobic capacity sportspersons

Discussions

Researcher has undertaken his work on, "Muscular Endurance among High Aerobic Capacity and Low Aerobic Capacity Sportspersons: A Comparative Study"**.** The sportspersons were selected from the government degree colleges of Kashmir division who are affiliated to University of Kashmir. The age of these sportspersons was ranged between 18 to 25 years. For the selection of these 200 sportspersons from both the groups (100 of high aerobic capacity sportspersons group and 100 of low aerobic capacity sportspersons group), the 331 sportspersons were tested through Harvard Step Test. After the results from Harvard step test, the sportspersons who fall in the high and low category of aerobic fitness, were selected for the further study. For his collection of data, the researcher applied purposive sampling method. The test used for this study to measure the muscular endurance of the sportspersons was Sit-Ups. The data was analysed using descriptive and t test. After statistical analysis, it was found that there was significant difference of Muscular endurance level between high aerobic capacity sportspersons and low aerobic capacity sportspersons. Hence the hypothesis given earlier was accepted.

Conclusion and Recommendations

The result showed that there was significant difference of Muscular endurance level among high aerobic capacity sportspersons and low aerobic capacity sportspersons. Hence the hypotheses given earlier, was accepted.

The similar study may be repeated on the elite players and female subjects. The similar study may be taken on different sportsmen with different geographical area. Same research may be taken on a larger sample of the students.

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