

## Effects of strength training on speed leg explosive power and muscular endurance of college men students

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### ABSTRACT

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The purpose of the present investigation was to find out the effects of strength training on speed leg explosive power and muscular endurance of college men students. To achieve the purpose, 30 men students were selected from Govt. Alagappa Arts College, Karaikudi, Tamil Nadu as subjects. Their age ranged from 17 to 20 years. They were divided into two equal groups of 15 subjects each and assigned to experimental group-I and control group. In a week the experimental group-I underwent strength training and the control group was not given any specific training. All the subjects underwent the test of speed, leg explosive power and muscular endurance. They assessed before and after the training period of 8 weeks. The analysis of covariance was used to analyze the data. The study revealed that the speed, leg explosive power and muscular endurance were significantly improved due to the influence of strength training.

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The event of sports is not limited. Each sport discipline requires different types of motor ability because of which a different type of training is required. Different training regiments carried out for a sufficiently longer duration, with different load dynamics, ensures enhancement and maintenance of performance. Improvement of one skill/ability has an impact on other abilities, as well. Mere possession of motor abilities does not have any significance unless there is training to improve and maintain it. Motor abilities are trained in isolation, and collectively. There are plenty of evidences that successful competitors in different sports, possess a good physique and compatible quantum of motor abilities; and reasonably distinct too. (Matveyen, 1981; Singh, 1991). In this study an attempt has been made to find out the effects of strength training on speed leg explosive power and muscular endurance of college men students.

### METHODOLOGY

To achieve these purpose, 45 men students were selected from Alagappa Arts College, Karaikudi Tamil Nadu as subjects. Their age ranged from 17 to 20 years. They were divided into two equal groups of 15 subjects each and assigned to experimental group-I, and control group. In a week, the experimental group-I underwent strength training (Stair training and Sand Running) and the control group was not given any specific training. The entire subject underwent test of speed, leg explosive power

and anaerobic power. The speed was measured by 50 yards dash (score in second), Leg explosive power was measured by Sergeant vertical jump test (score in meters) and muscular endurance was measured by Sit-up test (score in counts/minute) and they were assessed before and after the training period of 8 weeks. The analysis of covariance was used to analyze the data. The study revealed that the speed, leg explosive power and muscular training were significantly improved due to the influence of strength training.

### OBSERVATIONS AND DISCUSSION

Table 1 shows the analyzed data on speed. The pre- test, post-test and adjusted post-test means of the speed were (6.8 and 6.8), (6.5 and 6.9) and (6.5 and 6.9) for the experimental group and control group, respectively. The obtained 'F' ratio for pre-test 0.04 post test 5.48 and adjusted post-test 96. The obtained 'F' ratio of post and adjusted post test were 5.48 and 96. The table value was 3.23 at 5% level of significance for the degree of freedom (1, 28 and 1, 27). Therefore, it is proved that experimental group has been better than the control group.

Table 2 indicates the analyzed data on leg explosive power. The pre-test, post-test and adjusted post-test means of the leg explosive power were (1.04 and 1.08) (1.15 and 1.04) and (1.16 and 1.04) for the experimental group and control group, respectively. The obtained 'F' ratio