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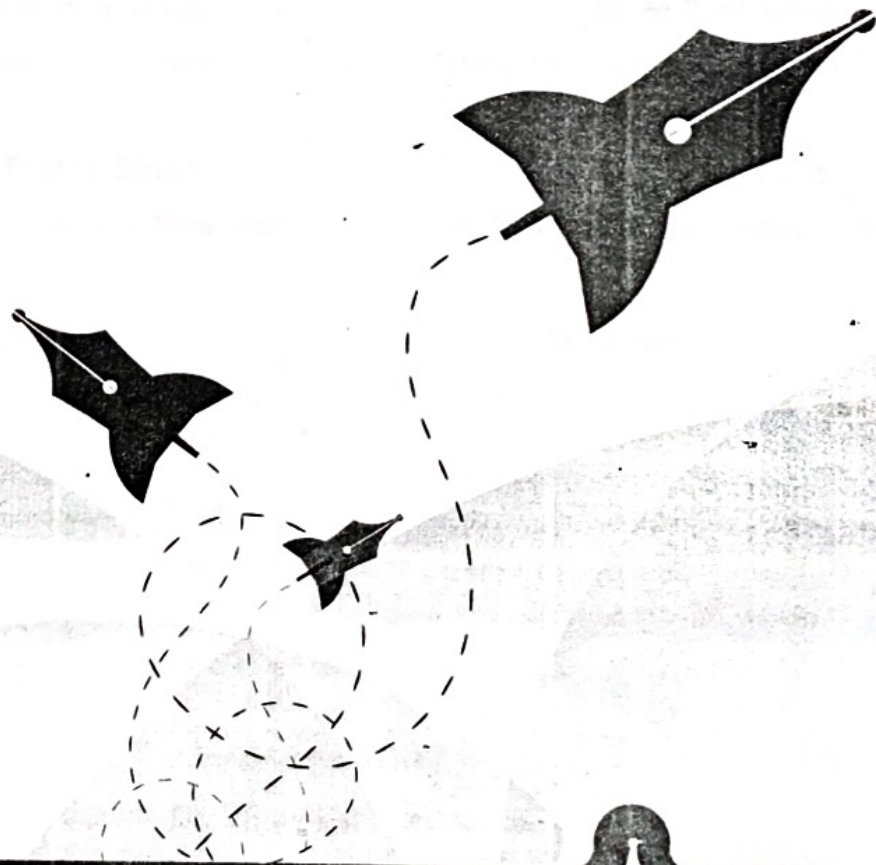
# शोध संचिता

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Editor in Chief

**Dr. Vinay Kumar Sharma**  
D. Litt. - Gold Medalist



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## EFFECT OF EXERCISE TRAINING PROGRAMME ON EXPLOSIVE STRENGTH OF LEG PERFORMANCE OF ATHLETICS PLAYER

□ Shr. Ishwar Nandedkar\*  
Prof. Dr. Venkat Mane\*\*

### ABSTRACT

#### Introduction

The world of the Gym is ever expanding with increasing intensity of competition and enlarging scientific studies of human movements. Gym is dynamic in nature and progressive in outlook.

The intense complex movement of top level performance in Gym is a great amount of physical capacity, to develop which, scientifically technique are adopted which are non as physical conditioning. In the selection of players measurement of physical fitness the physical fitness. Therefore, it is important that during selections of sportsmen for competition a reliability high weight ages should be given to physical fitness.

The training is a process of preparing an individual for any event or an activity or job. Usually in sports we use the term ecological and moral sports training which denote the sense of preparing sportspersons for the highest level of performance. But now day gym training is not just a term but it is very important subject that

affect each and every individual who takes up physical activity or gym either for health and fitness or for completion at different level. Hence gym training is the physical technical intellectual psychological and moral preparation of an athlete or a player by means exercises.

For a primitive man, food, shelter and clothing were his primary needs. These needs, however, increased with the progress of the society and among others education, health, recreation etc. come to be added in this growing list. These human needs can be classified into biological, sociological and psychological aspects of life. Man has made a great progress in fulfillment of all these needs and education has played a great role in the ever continuing process of evolution of man from being primitive to the present, cultured and civilized human being.

#### Statement of the problem:

“Effect of Exercise Training Programme on Explosive Strength of Leg Performance of Athletics Player”

\*Research Scholar (Physical Education), Swami Ramanand Teerth Marathwada, Nanded (M.S)

\*\*Research Guide (Physical Education), S.R.T.M. University, Nanded, University, Director of Physical Education & Sports, Digambarrao Bindu Arts, Commerce & Science College, Bhokar Dist. Nanded (M.S)



**Hypothesis:**

In this study the investigator hypothesizes that exercise training brings out an improvement on Explosive strength of leg Athletics Player.

**Significant Of the Statement:**

*This investigation will help to understand the effect of exercises in relation to Explosive strength of leg of the Athletics players in the execution of skills.*

**Limitation:**

1. No attempt was made to study the subjects training background.
2. Height, weight and other anthropometric measurements were not taken into consideration.

**Delimitation:**

1. The study is conducted only on Male Players of Nanded Dist,
2. The study was delimited to the players of Athletics Players in Dist. Nanded.
3. Age group of the subjects ranged between 17 to 19 years.
4. Explosive strength of leg test was conducted to measure the jumping ability.

**Methodology****Sample of the Study**

The initial explosive strength of leg performance was taken for 30 Players; the subjects were divided into equal groups consisting of fifteen each. The experimental group was given skipping rope exercise training programme for a period of 45 days and the control group was given general conditioning along with the experimental group exclusively skipping rope exercises training programme.

**Tools of the study:**

The following tools were used for the present study under report.

For the present study Test was adopted to measure the difference the components viz. (1) Vertical Jump

The vertical Jump test was conducted twice. Initially before the skipping rope exercise training programme was given. The final test was conducted after 45 days of skipping rope exercise training programme to the experimental group and general conditioning to the control group. The vertical jump test was conducted in the Dist. Nanded with necessary equipments.

**Training Programme :**

The skipping rope exercises training programme were given to be experimental group and general conditioning to the control group in the State And District Level Player in Nanded . The skipping rope was at the disposal of subject for practice was plastic ropes. Fifteen plastic skipping ropes were used at the practice session. The skipping exercise was given between 6.30 to 7.30 am in the alternative days.

1. Skipping Rope with Both Legs
2. Skipping Rope with Alternate Leg
3. Skipping with Leap Forward and Backward
4. Skipping Rope with High Knee Action

**Statistical Techniques to be used:**

The data collected in this study was subjected to statistical analysis. The descriptive statistics were used to find out the means and standard deviations, and "t-test". To find out the significant difference equality of levels and 't' value is also calculated.



**Table -1**

**Mean values difference, standard deviation and The't' values of control group**

Group	Mean	Mean Diff.	Std. Deviation	't' ratio
Pre Test	095	5.52	15.16	1.27
Post Test	100.97		13.37	

Significant Level: 0.05

**Table -2**

**Mean values, mean difference, standard deviation and The't' values of experimental group**

Group	Mean	Mean Diff.	Std. Deviation	't' ratio
Pre Test	110.88	26.64	19.48	4.12*
Post Test	137.53		29.57	

\* Significant Level: 0.05

**Discussion:**

Several researches have been made on explosive strength of leg performance and its influence on various skills in sports field. The investigator was convinced that skipping rope exercise training programme would improve the explosive strength of leg performance in Athletics players. The result of this investigation showed a significant improvement in the subjects of the experimental group after a regular practice than the control group. Skipping rope exercise training programme, the test showed improvement in performance of explosive

strength of leg performance for all subjects of experimental group.

**Conclusion:**

1. The schedule of skipping rope exercise training programme was found to be a suitable one to improve the explosive strength of leg.
2. The initial and the final mean value of performance of vertical jump on the experimental group are 110.88 and 137.58 respectively which indicate the improvement in the explosive strength of leg performance.



The mean difference between the initial and final value performance was 26.64.

3. The initial and final value of the explosive strength of leg performance of the control group are 0.95 and 100.97 respectively, which indicate that the results not as significant as that of experimental group.
4. The statistical analysis of the data regarding the experimental groups showed a mean change of 137.53 and standard deviation of 29.57 and t-value of explosive strength of leg performance 4.12 respectively. Therefore, t-value is significant at 0.05 level of confidence with 38 degree of freedom.
5. The statistical analysis of the data regarding the control group showed a mean change 100.97. The standard deviation 13.37 and t-value of explosive strength of leg performance are 1.37 and 1.96 respectively.

Therefore, the t-value is slightly significant.

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