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Effect of Selected Plyometric Exercises For Development of Arm Muscular Strength and Power of State Level Badminton Players.

Kamlakar K. Kadam,

Asst. Professor & Head, Dept. of Physical Education and Sports, Nutan College, Selu (M.S.)

Chandrasen Saruk ,

Head, Department of Physical Education and Sports, Art's College, Nandurghat Dist Beed (M.S.)

Aruna Satti Research Scholar. Andhra University, Visakhapatnam

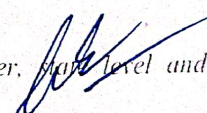
ABSTRACT:

The purpose of the present study to find out the effect of selected plyometric exercises for development of muscular strength and power of state level Badminton players in Aurangabad city. The sample for the present study consists of 20 male state level Badminton players whose are practiced at various clubs in Aurangabad. The subject are divided in two group i.e. control group (N=10) and experimental group (N=10) between the age group of 18 to 25 years. Plyometric exercises such as Medicine ball overhead throws, medicine ball side throws, medicine ball over back toss, medicine ball chest pass, medicine ball incline chest pass, medicine ball vertical toss, medicine ball catch and throw backhand, medicine ball power drop, plyometric push-ups etc. were given three times a week for eight weeks for experimental group and controlled group were given regular Badminton practice. To assess the arm muscular strength and power of Badminton players to push up strength and Medicine ball throwpower test. This study shows that due to the plyometric exercises there is a significant improvement of experimental group in the arm muscular strength and arm muscular power of Badminton players.

KEYWORDS

Plyometric exercises, arm muscular strength, arm muscular power, state level and Badminton players.

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INTRODUCTION

Badminton is the most popular Indoor sports. The research was designed to assist with the development of coastal safety campaigns and sportpersons high performance. Sport training is a systematic process spreading over a long period. For best result the system of training has to be based and conducted on scientific facts and lines where it is not probable to do that, the training has to be based on the results successful practice which has withstood the test of time sport. Physical training aims at improving the performance of sports persons. The sports performance depends on several factors. The performance of sports primarily depends on his performance capacity, such as speed, strength and endurance. All these factors therefore are the principle aims of physical training. Sport training is a physical, technical, moral and intellectual participation of with the help of physical exercises. It is a planned process for the participation of athlete and players to achieve top-level performance.

Plyometric training refers to exercises that enable a muscle to reach maximal strength in as short a time as possible. Such exercise usually involve some form of jumping, but other modes of exercise exist. The elements ply and metric come from Latin roots for 'increase' and 'measure', respectively; the combination thus means "measurable increase". Plyometric exercise utilizes the force of gravity to store energy in the muscles. This energy is then utilized immediately in an opposite reaction, so the natural elastic properties of the muscle will produce kinetic energy to sports persons.

METHODS AND PROCEDURES

The sample for the present study consists of twenty state level Badminton male players from Aurangabad city were randomly selected as the subject of the study and age group of 18 to 25 years. Arm muscular strength and power was selected as a dependent variable and plyometric exercise were considered as independent variables. Plyometric exercises such as Medicine ball overhead throws, medicine ball side throws, medicine ball over back toss, medicine ball chest pass, medicine ball incline chest pass, medicine ball vertical toss, medicine ball catch and throw backhand, medicine ball power drop, plyometric push-ups etc. were given three times a week for eight weeks (45 min/day) for

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experimental group and controlled group were given regular kayaking practice. A pilot study was conducted before the investigation. The pre and post tests for both groups were collected from standardized test of push up and medicine ball throw for data was analyzed to find the t-ratio for significance result. Standard statistical packages were used to analyses the data.

Table-1

Sr. No.	Variable	Test	Measuring Unit
1.	Arm Muscular Strength	Push up	Number
2.	Arm Muscular Power	Medicine ball throw	Meter

STATISTICAL ANALYSES

Student's t-test for independent data was used to assess the between-group differences. The level of $p \leq 0.01$ was considered significant.

RESULT AND DISCUSSION

The study shows that due to the plyometric exercises there is improvement of experimental group in the arm muscular strength, arm muscular power and controlled group has low improvement in arm muscular strength and arm muscular power due to the regular practice. It is recommended that the plyometric exercises are admirable to improve the arm muscular strength and power of kayaking players. The finding pertaining to the data are presented in the table 2.

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