



EFFECT OF JUMP CIRCUIT CORE STRENGTH TRAINING AND ON COURT VOLLEYBALL CONDITIONING ON SELECTED POWER PARAMETERS AMONG WOMEN PLAYERS

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Abstract:

The purpose of the study was to find out the effect of jump circuit core strength training and on court volleyball conditioning on selected power parameters among women players. It was hypothesized that there would be significant differences on selected power parameters due to the effect of jump circuit core strength training and on court volleyball conditioning among women players. For the present study the thirty women players who participated in the Inter-collegiate Tournaments were selected at random and their age ranged from 18 to 22 years. For the present study pre test – post test random group design which consists of control group and experimental group was used. The subjects were randomly assigned to two equal groups of fifteen players each and named as Group 'A' and Group 'B'. Group 'A' underwent jump circuit core strength training and on court volleyball conditioning and Group 'B' has not undergone any training. The data was collected before and after twelve weeks of training. The data was analyzed by applying dependent 't test'. The level of significance was set at 0.05. The jump circuit core strength training and on court volleyball conditioning had positive impact on explosive power (vertical) among women players. The jump circuit core strength training and on court volleyball conditioning had positive impact on explosive power (horizontal) among women players.

Keywords: Jump circuit core strength training, court volleyball conditioning in series Training, Explosive power Women players.

INTRODUCTION

Volleyball is played in more than sixty countries and more than sixty million people. In Eastern Europe, Asia and South America top games draws crowds, the size of which rival those at soccer matches. Volleyball is considered as a top level competitive sport in more than twenty countries. The game of Volleyball was invented in 1895 by William G Morgan who worked for the Y.M.C.A in Holyoak, Massachusetts. His early form of the game was designed to provide mild exercise for large groups of businessmen. This original game was very simple any number of players batted a basketball bladder backward and forward over a tennis net which was fixed at a height of six feet. Since then the game has developed and spread worldwide. The main reason of its popularity was it can be played indoors and outdoors, need little space compared to other games, and it can be played by both sexes and over a considerable age range. Play can be tremendously varying standards from a purely recreations level on the beach and in the park, through all levels of clubs and school level competitions, right up to international level. One of the fundamental goals of volleyball training is to "build" explosive type strength "into" not only the biochemical structure, but also many other structures of volleyball techniques. Volleyball conditioning methods allows skill development and fitness. This type of conditioning is technique specific and could have complex game like

drills with more efficient type of conditioning combining physical development along with technical and mental skills.

Methodology

The purpose of the study was to find out the effect of jump circuit core strength training and on court volleyball conditioning on selected power parameters among women players. It was hypothesized that there would be significant differences on selected power parameters due to the effect of jump circuit core strength training and on court volleyball conditioning among women players. For the present study the thirty women players who participated in the Inter-collegiate Tournaments were selected at random and their age ranged from 18 to 22 years. Explosive power (vertical) was tested by sargent jump test and Explosive power (Horizontal) was tested by standing broad jump test. For the present study pre test – post test random group design which consists of control group and experimental group was used. The subjects were randomly assigned to two equal groups of fifteen players each and named as Group 'A' and Group 'B'. Group 'A' underwent jump circuit core strength training and on court volleyball conditioning and Group 'B' has not undergone any training. The data was collected before and after twelve weeks of training. The data was analyzed by applying

dependent 't' test. The level of significance was set at 0.05.

**TABLE 1
VARIABLES AND TEST**

S.No	Variables	Tests
1	Explosive power (vertical)	Sargent Jump
2	Explosive power (horizontal)	Standing Broad Jump

Results

The findings pertaining to analysis of dependent 't' test between experimental group and control group on selected power parameters among women players for pre-post test respectively have been presented in table 2 to 3.

**TABLE 2
SIGNIFICANCE OF MEAN GAINS & LOSSES BETWEEN PRE AND POST TEST SCORES ON SELECTED POWER PARAMETERS OF JUMP CIRCUIT CORE STRENGTH TRAINING AND ON COURT VOLLEYBALL CONDITIONING IN SERIES TRAINING GROUP**

S.No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ DM	't' Ratio
1	Explosive power (vertical)	21.73	29.40	7.67	0.84	0.24	13.50*
2	Explosive power (horizontal)	1.07	1.20	0.13	0.47	0.17	5.45*

* Significant at 0.05 level

Table 2 shows the obtained 't' ratios for pre and post test mean difference in the selected variable of explosive power (vertical) (13.50) and explosive power (horizontal) (5.45). The obtained ratios when compared with the table value of 2.14 of the degrees of freedom (1, 14) it was found to be statistically significant at 0.05

level of confidence. It was observed that the mean gain and losses made from pre to post test were significantly improved in power parameters namely explosive power (vertical) and explosive power (horizontal) thus the formulated hypothesis is accepted.

**FIGURE I
COMPARISONS OF PRE – TEST MEANS AND POST – TEST MEANS FOR EXPERIMENTAL GROUP IN RELATION TO POWER PARAMETERS**

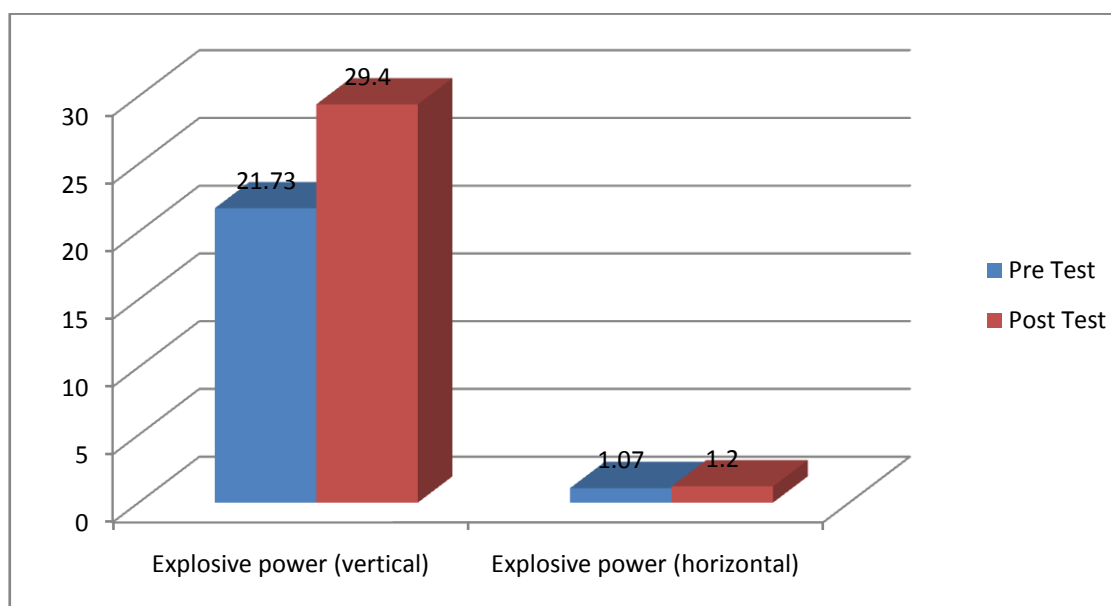


TABLE 3
SIGNIFICANCE OF MEAN GAINS & LOSSES BETWEEN PRE AND POST TEST SCORES ON SELECTED POWER PARAMETERS OF CONTROL GROUP

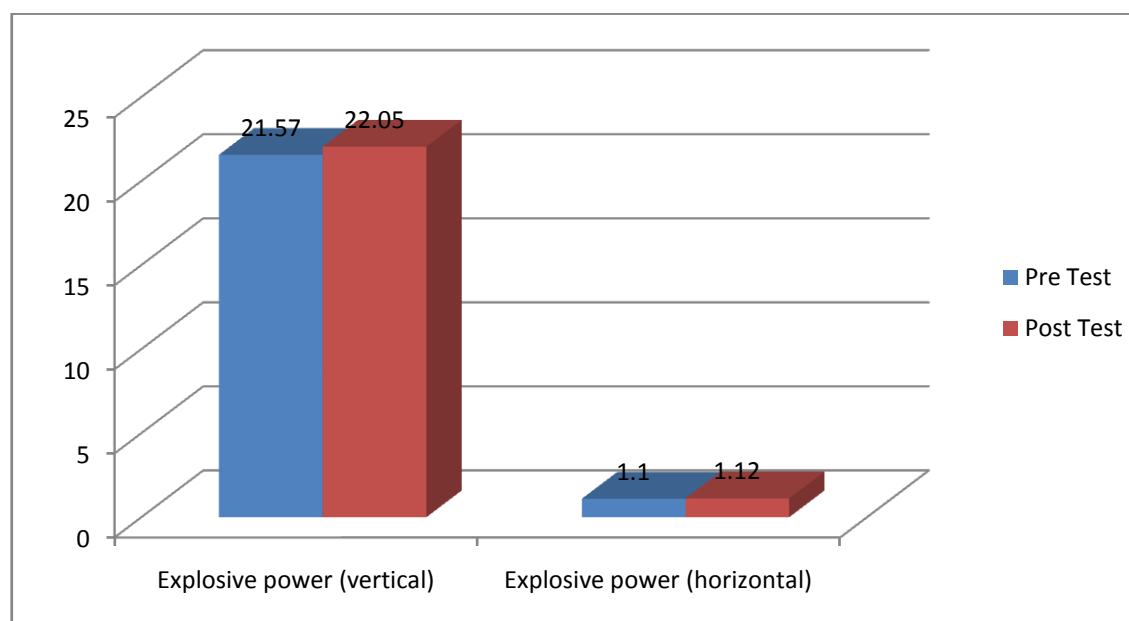
S.No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ DM	't' Ratio
1	Explosive power (vertical)	21.57	22.05	0.48	0.82	0.23	0.74
2	Explosive power (horizontal)	1.10	1.12	0.02	0.35	0.09	0.61

* Significant at 0.05 level

Table 3 shows the obtained 't' ratios for pre and post test mean difference in the selected variable of explosive power (vertical) (0.74) and explosive power (horizontal) (0.61). The obtained ratios when compared with the table value of 2.14 of the degrees of freedom (1,

14) it was found to be statistically significant at 0.05 level of confidence. It was observed that the mean gain and losses made from pre to post test were not significantly improved in power parameters explosive power (vertical) and explosive power (horizontal).

FIGURE II
COMPARISONS OF PRE – TEST MEANS AND POST – TEST MEANS FOR CONTROL GROUP IN RELATION TO POWER PARAMETERS



Discussions on Findings

In case of power parameters i.e. explosive power (vertical) and explosive power (horizontal) the results between pre and post test has been found significantly higher in experimental group in comparison to control group. This is possible because due to jump circuit core strength training and on court volleyball conditioning which may also bring sudden spurt in power parameters in women players. The findings of the present study have strongly indicates that jump circuit core strength training and on court volleyball conditioning of twelve weeks have significant effect on selected power parameters i.e., explosive power

(vertical) and explosive power (horizontal) of women players. Hence the hypothesis earlier set that jump circuit core strength training and on court volleyball conditioning would have been significant effect on selected power parameters in light of the same the hypothesis was accepted.

Conclusions

On the basis of findings and within the limitations of the study the following conclusions were drawn:

1. The jump circuit core strength training and on court volleyball conditioning had positive impact on explosive power (vertical) among women players.
2. The jump circuit core strength training and on court volleyball conditioning had positive impact on explosive power (horizontal) among women players.

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