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Effect of Daily Undulating Periodization Training on Selected Strength Parameters among Basketball Players

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Abstract

The purpose of the study was to find out the effect of daily undulating periodization training on selected strength parameters among basketball players. To achieve the purpose of the present study, thirty men basketball players from Madurai district, Tamilnadu, India were selected as subjects at random and their ages ranged from 17 to 23 years. The subjects were divided into two equal groups of fifteen each. Group I acted as Experimental Group I (Daily undulating periodization training) and Group II acted as control group (No training). The requirement of the experiment procedures, testing as well as exercise schedule was explained to the subjects so as to get full co-operation of the effort required on their part and prior to the administration of the study. Pre test was conducted for all the subjects on selected speed and strength parameters. This initial test scores formed as pre test scores of the subjects. The duration of experimental period was 12 weeks. After the experimental treatment, all the forty five subjects were tested on their selected strength parameters. This final test scores formed as post test scores of the subjects. The pre test and post test scores were subjected to statistical analysis using paired 't' test. In all cases 0.05 level of significance was fixed to test hypotheses. The daily undulating periodization training had shown significant improvement in all the selected strength parameters among basketball players after undergoing the training for a period of twelve weeks.

Keywords: Daily Undulating Periodization, Strength, Basketball.

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Introduction

The concept of daily undulated periodization can be designed in endless ways, and can be designed to suit a whole array of goals. Despite traditional linear designs conforming to high intensity per session, and sometimes high volume, daily undulated periodization offers high volume over time. It's increasing this volume over time that is the crucial factor for hypertrophy. The principles of this daily undulated periodization training design are to follow the power first, strength in the middle, and hypertrophy at the end of the session. Daily undulated periodization is a method of programming that has performing a core set of movements three or more times per week, working in different repetition ranges with each session. The goal of periodization is progression towards maximizing strength while minimizing fatigue and injury. With daily undulated periodization, the daily variation of periodization places enough stress on body to continually make progress, yet it doesn't allow it to adapt to the stress and plateau. The basketball is a ball game played by two teams of 5 players, plus 7 substitutes in each team.

Now a days, the tactics of the modern game of basketball comprises a large number of means, methods and elements. Its effective application is only possible if all factors that are characteristic of the particular match are taken into account. These factors result from the objective assessment of the possibilities of one's own team and those of the opponent. But also to be considered are the concrete external conditions under which the match takes place. If these factors are not taken into account a team will not be able to achieve an optimum score. Gaining effective control of these factors will only be possible if the tactics of basketball is mastered. The tactics in basketball is constantly developing. The word a technique is used here refers to the particular movements and skills both on and off the ball which required in basketball. It is especially important in basketball to master the fundamental techniques. The object of the game is to score baskets and prevent them being scored. Like any other game, basketball too involves various factors for the success and high level performance.

Methodology

The purpose of the study was to find out the effect of daily undulating periodization training on selected strength parameters among basketball players. To achieve the purpose of the present study, thirty men

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Results

Table 1

Significance of mean gains & losses between pre and post test scores on selected variables of daily undulating periodization training group

S.No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ DM	't' Ratio
1	Explosive strength (horizontal)	1.65	1.74	0.09	0.04	0.01	7.54*
2	Explosive strength (Vertical)	27.46	36.86	9.40	2.97	0.76	12.25*
3	Strength endurance	38.33	46.53	8.20	2.51	0.64	12.63*

* Significant at 0.05 level

An examination of table 1 indicates that the obtained 't' ratios were 7.54, 12.25 and 12.63 for explosive strength (horizontal), explosive strength (vertical) and strength endurance respectively. The obtained 't' ratios on the selected variables were found to

be greater than the required table value of 2.14 at 0.05 level of significance for 14 degrees of freedom. So it was found to be significant. The results of this study showed that statistically significant and explained its effects positively.

Figure 1

Bar diagram shows the mean values of daily undulating periodization training group

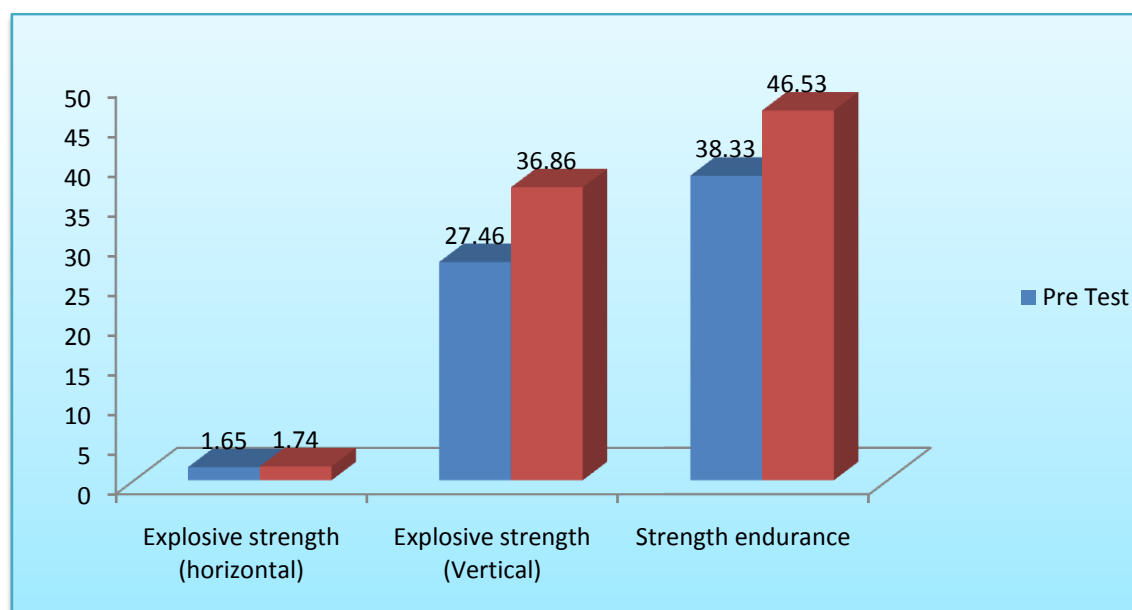


Table 2

Significance of mean gains & losses between pre and post test scores on selected variables of control group

S.No	Variables	Pre-Test Mean	Post-Test Mean	Mean difference	Std. Dev (±)	σ DM	't' Ratio
1	Explosive strength (horizontal)	1.63	1.64	0.01	0.05	0.01	0.17
2	Explosive strength (Vertical)	28.20	28.26	0.06	1.86	0.48	0.13
3	Strength endurance	38.66	39.20	0.53	1.64	0.42	1.25

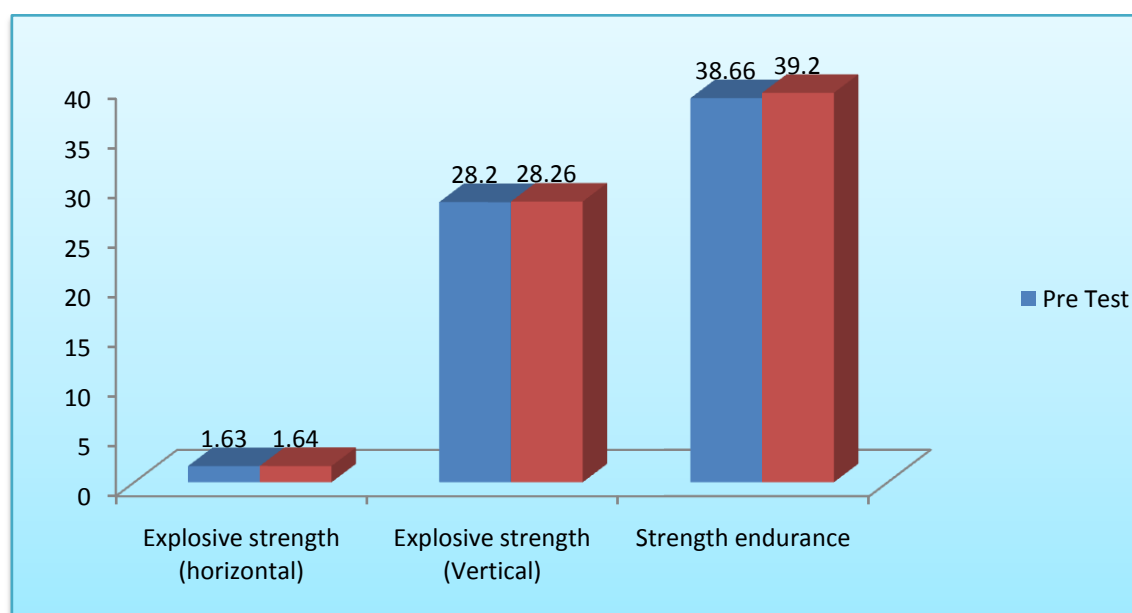
* Significant at 0.05 level

An examination of table 2 indicates that the obtained 't' ratios were 0.17, 0.13 and 1.25 for explosive strength (horizontal), explosive strength (vertical) and strength endurance respectively. The obtained 't' ratios on

the selected variables were found to be lesser than the required table value of 2.14 at 0.05 level of significance for 14 degrees of freedom. So it was found to be insignificant.

Figure II

Bar diagram shows the mean values of control group



Conclusion

From the analysis of the data, the following conclusions were drawn:

1. The daily undulating periodization training had shown significant improvement in all the selected strength parameters among basketball players after undergoing the training for a period of twelve weeks.

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