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Effect of Selected Medicine Ball Exercises on Service Performance of University Men Volleyball Players

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Abstract

The purpose of the study was found out the effect of selected medicine ball exercises on service performance of university men volleyball players. To achieve the purpose of the study 15 university men volleyball players were selected from Maruthi college of Physical Education, Coimbatore, Tamilnadu and Faculty of GAPEY, Ramakrishna Mission Vivekananda University, Coimbatore, Tamilnadu with randomly. The age of the subject ranged from 18-28 years. The performance of service was chosen for this study as criterion variable. The selected university men volleyball players underwent six weeks medicine ball exercises weekly three days except Saturday and Sunday. The collected data were analyzed statistically by using dependent 't' test was used to determine the differences. It was found that there was a significant improvement on service performance due to the effect of selected medicine ball exercises in university men volleyball players.

Keywords: Medicine Ball, Service, University, Volleyball.

Introduction

Medicine ball exercises are used to develop strength and power for many sports. There are exercises for all kinds of movements: (throws, lifts, pulls etc.) All you need is a set of medicine balls of different bounciness and weight and for some exercises maybe a training partner. Some exercises are suitable for plyometric training programs; others can be used to develop endurance or isometric strength. However, medicine ball exercises are appropriate for all fitness levels and ages. The advantage of medicine ball training over weight training is that you don't need that much expensive equipment. Besides the exercises are not really dangerous if not executed 100% correctly. Depending on which sport you are into, you should choose the right exercises. After a while you can even make up your own sport specific movements. Medicine ball training is very popular in track and field sports, swimming, ball sports etc. Indeed both, amateur and professional athletes of most sports can benefit from medicine ball exercises.

To be successful in today's track and field environment, athletes must work on a variety of components of athletic ability. Flexibility, strength, 1976 onwards the game got a new trend and drastic changes have take place in skills and performance. speed, power, agility, balance, technique, kinesthetic awareness, endurance, psychological development and injury prevention are all areas that need improvement for an individual to become a successful athlete. As individuals become more athletic their performances will equally improve. Because of time restraints, and athlete will usually only concentrate on one or two areas. For example, a discus thrower may only work on strength (by spending a great deal of time in the weight room) and technique (by taking a large volume of throws). The discus thrower is bypassing many significant training areas that are equally important to their success. Optimum performance level is never fulfilled. It is virtually impossible to select each individual component of athletic ability and improve each component by isolating activities for just that area. There is simply not enough time. Therefore, coaches and athletes must use activities that will "cross train" many areas at the same time. This is the importance of medicine ball "functional" training. **(www.wikipedia.com, 2014)**

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Hypothesis

It was hypothesized that there would be significant improvement in service performance in university men volleyball players.

Methodology

The purpose of the study was to found out the effect of selected medicine ball exercises on service

performance of university men volleyball players. To achieve the purpose of the study 15 university men volleyball players were selected from Maruthi college of Physical Education, Coimbatore, Tamilnadu and Faculty of GAPEY, Ramakrishna Mission Vivekananda University, Coimbatore, Tamilnadu with randomly. The age of the subject ranged from 18-28 years. The performance of service was chosen for this study as criterion variable. The selected university men volleyball players underwent six weeks medicine ball exercises weekly three days except Saturday and Sunday. The collected data were analyzed statistically by using dependent 't' test was used to determine the differences

Selection of Variable and Test Item

The investigator reviewed the available scientific literature from books, Journals, periodicals, research, papers and magazines and also taking into consideration the feasibility criteria of availability of instrument, the following variable and standardized test was used to collect relevant data on the selected variable and presented in table I.

Table - I. Selection of Variable and Test Item

VARIABLE	TEST ITEM/ INSTRUMENT	UNIT OF MEASUREMENT
Service performance	Russell–Lange Volleyball Serving Test	Numbers

Medicine Ball Exercises Program

The selected medicine ball exercises were given to university volleyball players after taking an initial test. After the initial test selected medicine ball exercises program was scheduled for one session in the morning between 6.30 AM to 7.30 AM for 3 days (Monday, Wednesday and Friday) a week and the same was continued for 6 weeks.

10 Minutes – Warming up and stretching
40 Minutes – Medicine Ball Exercises
10 Minutes - Relaxation

Results and Discussions

The data pertaining to the variable in this study was examined by using dependent 't' test to find out the significant improvement on service performance of university men volleyball players in order to determine the difference and tested 0.05 level of significance. The dependent 't' test on data obtained for service performance of the pre test and post test means of university men volleyball players have been analyzed and presented in table II.

Table – II. The 't' Test for Pre and Post Tests on Service Performance of University Men Volleyball Players

Variable	Group	Mean	Standard Deviation	Mean Difference	Df	t' Ratio	Table Value
Service Performance	**Pre Test**	24.93	3.51	5.13	14	7.525*	2.14
	Post Test	30.06	2.18				

't' value 2.14 significant at 0.05 level of confidence

From table II, it is seen that the dependent 't' test values between the pre and posttest means of selected university men volleyball players are 24.93 and 30.06 respectively. Since the obtained't' test value (7.525) of selected university men volleyball players was greater than the table value of 2.14 at 0.05 level of confidence, it is concluded that the selected university men volleyball players had significant improvement in service performance due to the effect of selected medicine ball exercises.

Discussion on Findings

The results are agree with the studies done by (Szymanski DJ, et al., (2007), Vant Den Tillaar R and Marques MC (2013), Harris C et al.,(2011), Ikeda Y, et al., (2007), Earp, et al.,(2010). The findings of the study are on par with the literature that relatively medicine ball exercises are required to improve the service performance of university men volleyball players. The pre and post tests mean values of university men players on service performance is graphically represented in figure1.

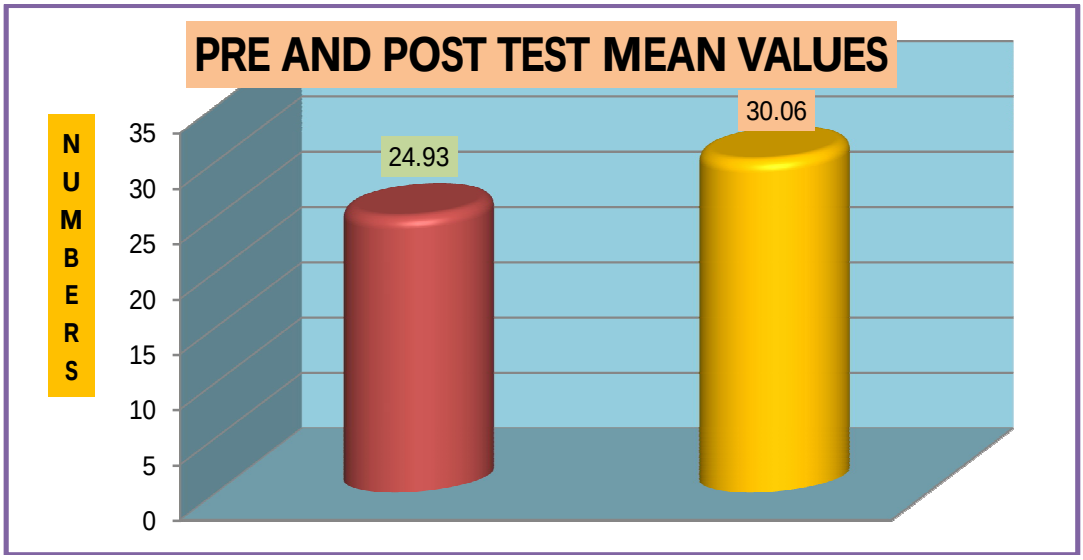

Figure - 1. Showing the pre and post tests mean values of university men volleyball players on service performance.

Discussion on Hypothesis

It was hypothesised that there would be significant improvement in service performance due to the influence of medicine ball exercises in university men volleyball players. The findings of the study also produced the same results. So the hypothesis was accepted at 0.05 level of confidence.

Conclusions

With in the limitation of the present study, the following conclusion was drawn.

On the basis of results obtained by statistically analyzing the data, it is concluded that there is a significant improvement found between the pre and post tests of selected university men volleyball players on the performance of service due to the influence of selected medicine ball exercises.

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