Core Stability Training On Muscular Endurance Among Novice Badminton Players

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Abstract: Core stability training is a structure of training to increase an endurance and neuromuscular control. Its role to improving the fitness level of strengthening body core muscles as well as core stability training on muscular endurance among novice badminton players. The current research report was to discover Core-stability training on Muscular Endurance among novice badminton players. Thirty badminton men players were selected from Adukalam Badminton Academic, Pondicherry and the participant level age categories in between 17 to 22 years. The total numbers of participant 30 numbers were categorized into two groups and were erratically assigned as Experimental and Control group. The Experimental group undergone Muscular-endurance training programme and Control group doesn't involves any sort of training programme. Muscular endurance was assessed by push-ups. The data was collected the fore and after eight weeks of training programme. Further this result reveals there is no significance were found and increased in the core stability Muscular-endurance was analysis for control group in the present study.

Index Terms : Badminton, Core stability training, Fatigue, Injury prevention, Muscular Endurance, Novice, Skeletal structure.

1. INTRODUCTION

Core-stability describes the position and locomotion of the upper limbs of the body and its potential to control the muscles. This involved muscles deep within the skeletal muscles which connect part of upper limbs into the deltoid muscle, Pectoralis major and minor, Triceps, the Ulnar Muscles, Serratus Anterior, Abdominal Muscles, Coracobrachialls and Traperius. It assist in the maintenance of good posture provide the foundation for arm and shoulder power. A multi-dimensional training programmed done on a unique to enhance human performance and function strength and power [7]. Core stability main function is to maintain good physic then support to protect the rib cage, shoulder and skeletal structure from extreme ranges of movement and from the excessive or shoulder power acting on the body [1]. "Core training as any training focused at the upper part of the body." The muscles ability to continue to perform without fatigue its called Muscular endurance [2]. Core stability training is an essential component of sports performance and plays a key role in injury prevention [4]. The primary function of body core muscles is to stabilize the upper part of the body, thereby providing a strong foundation for movements of arms and shoulder [9]. For Novice Badminton players fitness become an important factor in deciding to compete in major competition. Expert performer process information at a deeper, more tactical level, while novice performer process events in the environmental or surface features of a games situation.

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The performers have specialized search and retrieval abilities from game situations and long-term memories, while novice performers do not have these abilities or the game experiences to draw from in their long-term memories. The performers will have high success at performing skills correctly during games, perform effortlessly and more automatically, show greater consistency and adaptability in performing movement patterns and better at monitoring their own performance as well as detecting and correcting errors [6]. A player must to hold endurance is important because badminton matches last between 30 and 90 minutes, which 30 percent to 45 percent of the total time on court is actual competition [10]. Power and Strength is also an important factor in badminton even though the rackets weight less than 4 ounces. In addition, shoulder and leg strength is important for lunging to the net and jumping backward in the court to hi clear and smashes powerful. Players who are in excellent physical condition develop confidence and feel comfortable playing long rallies and smash that require a great deal of running, jumping and lunging [3].

2. MATERIALS AND METHODOLOGY

2.1 Participants

The study was conducted on 17 to 21 years age ranged thirty novice's badminton players from Adukalam Badminton Academic, Pondicherry. They randomly assigned into two groups. Experimental group of 15 Numbers and another group as control group 15 Numbers. They followed an incessant whole body / top to bottom training program that involved training all major muscle group alternative days per week using training for 8 weeks.

2.2 Procedures

Prior to workout, subjects performed a standardized series of stretching and flexibility exercises. To minimize risk injury, a 10-15 minutes warm-up and warm down schedule was followed before and after exercises. Subjects engaged in a supervised, core stability training program for 45 minutes alternative days in a week. The subject's muscular endurance was assessed by push-ups before and after the eight week training programme. The core stability training group shown experienced a significantly greater

improvement muscular endurance then control group. Further the result shows significance difference between the groups in Muscular-endurance among novice badminton players.

3. Statistical analysis

SPSS 20.0 programme was used in the analysis of the data obtained through the research. 't' test was applied to determine significant within and between group differences. Significance levels was pointed a $p<0.05$.

3.1 Results

Investigation from this study of Mean values and Standard deviation, 't' value of in muscular endurance values took place before and after the experimental and control groups values are presented in table - I.

Table – I

	Group	Mean	S.D	't' Ratio
Muscular Endurance	Experimental	35.61	0.954	12.08*
	Control	29.85	2.251	

*Level of significant at 0.05 level. (Table value 2.92)

It is evident from Table – I, that the calculated't' value 12.08 is higher than the table 2.l2 at 0.05 level of significance. Hence the stated hypothesis is accepted. The muscular endurance mean scores of experimental group (M=35.61) had better when compared with control group (M=29.85)

There is inferred that a major deviation in Muscular-endurance amongst Experimental group and Control group. The Muscular-endurance scores between Experimental group and Control group are represented using graphical presentation in Figure. I

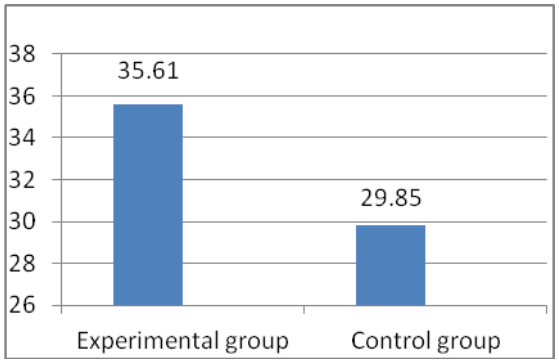

Figure – I

Graphical bar diagram shows mean scores value (Muscular Endurance)

4. DISCUSSION

The objectives the research analysis was to figure out the Core-stability training programme on muscular endurance ended eight weeks in order to improve the core Muscle-endurance capacity of novice Badminton players. The current results show that eight of core stability training has significant improvements in Muscular-endurance pushups tested. Hence, no significance were found and increased in the core Muscular-endurance was analysis for control group in the present study.

5. CONCLUSION AND RECOMMENDATION

Due to 8 weeks training programme the muscular endurance among the novice badminton players as improved significantly based on the improvement the shoulder and arm power further recommended further research for using core stability training programme in various surface. Also this research recommended major games like basketball, football, hockey, kabaddi, handball and tennis. The coaches can include the same set of training as part their training schedule to develop.

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