

# Effect on badminton players by selected exercises of flexibility and co-ordination

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■ ABSTRACT

The aim of the investigator to find out the effect of selected exercises on flexibility and co-ordination of Badminton players. Badminton has an important place in the world of sports. It has grown enormously in popularity over the last few years. Exercise is very important for the development of co-ordination and flexibility of Badminton players. For that purpose twenty badminton players of Degree College of Physical Education, Amravati were selected as the subjects. The age of the subject was ranging in between 18 to 25 years. Random group design was adopted for the study. The subjects were equally divided into two groups. *i.e.* experimental and control group. Each group was considered of 10 subjects. The experimental group went through a training programme of selected exercises for a period of six week. The control group engaged with their regular physical activity only. The data was collected before and immediate after completion of 6 weeks training programme by using the Sit and Reach Test Shoulder Elevation Test, Eye Hand Coordination test and Eye Foot Coordination Tool. To find out the significant difference of mean performance of control group and experimental group-t test was applied. To test the hypothesis the level of significance was set at 0.05 level of confidence. The findings of this study revealed that there is a significant improved in the performance of the experimental group after six week training programme but there is no significant improvement to the performance of the control group.

■ Key Words : Selected Exercises, Flexibility, Co-ordination

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In present era, the game and sports has become an integral part of mans life. Now a days the modern physical Education has totally changed and given a new mode. It is now recognized an integral part of education and can no longer be divorced from it. Badminton is one of the most popular sports in the world. Badminton is a sport played above a net using rackets and shuttles with stroking techniques that vary from relatively slow to quick and deceptive movement.

The game of badminton is passing through an exciting period of changes and development that in making teachers and coaches reevaluate their coaching methods, techniques

and tactics (Anzalone, 1963). Many researcher have also been completed in the foreign countries for the development of the game. Therefore the present researcher has selected the following study related to badminton.

Co-ordination is the ability to integrate muscles movements into an efficient patterns of movements. Co-ordination make the difference between good performance and poor performance (Cunningham, 1966). The efficiency of skill patterns depends upon the interrelation of speed, agility, balance and muscle movements to be performed and see the relationship of each movement to the total pattern. For any type of work co-ordination is very important. If the

organ of the body are weak than the Neuro muscular coordination is very important for any physical activities. The neuro muscular coordination of the individual when includes his ability to learn new skilled and finally achieve competency in physical activities is essential to all phases of physical education (Johnson *et al.*, 1982 and Kansal, 1996).

## METHODOLOGY

The main purpose of this study was to determine the effect of selected exercises on flexibility and coordination of badminton players.

For this purpose the present study was delimited to the following aspects. The study was restricted to the male Badminton players of Degree College of Physical Education, Amravati. The age of ranging from 18-25 years. The training was given at indoor stadium of Degree College of Physical Education, Amravati. A total period of six weeks training was administered on the experimental groups. The variables selected for this study were trunk flexibility, shoulder flexibility, eye hand coordination and eye foot coordination.

The data pertaining to this study were selected on 20 Badminton players of Degree College of Physical Education, Amravati. 20 Badminton players were selected from different courses of Degree College of Physical Education, Amravati among of those few were selected for the intercollegiate tournament and remaining were those opted the Badminton game as specialization. To collect data pertaining to this study the following test were administered. 1) Sit and Reach Test was administered to measure trunk flexibility and the score was recorded in centimeters. 2) Shoulder Elevation test was used to measure shoulder and Wrist flexibility and the score was be recorded in centimeters. 3) Eye hand coordination test was applied to assess the coordination between eye and hand and the score was recorded in seconds. 4) Eye foot coordination test was applied to assess the coordination between eye and foot and the score was recorded in seconds.

Simple random group design was adopted for this study. The subjects were divided into two homogenous groups on the basis of the initial test performance. The experimental treatment were given randomly to one group namely

**Table A : Training schedule**

Days	Exercise	Set	Repetition	Set Rest
<b>I<sup>st</sup> and II<sup>nd</sup> weeks of flexibility and co-ordination exercises</b>				
Monday	Trunk Twisting	1 min	5	2 min
Tuesday	Rope Skipping	1 min	5	2 min
Wednesday	Shoulder and Chest stretch	1 min	5	2 min
Thursday	Zig Zag running	1 min	5	2 min
Friday	Alternate toe touch	1 min	5	2 min
Saturday	Hip stretch	1 min	5	2 min
	Stepping with badminton, shuttle in Badminton Court	1 min	5	2 min
	Hamstring Stretch	1 min	5	2 min
<b>III<sup>rd</sup> and IV<sup>th</sup> weeks of flexibility and co-ordination exercises</b>				
Monday	Trunk Twisting	2 min	5	2 min
Tuesday	Rope Skipping	2 min	5	2 min
Wednesday	Shoulder and Chest stretch	2 min	5	2 min
Thursday	Zig Zag running	2 min	5	2 min
Friday	Alternate toe touch	2 min	5	2 min
Saturday	Hip stretch	2 min	5	2 min
	Stepping with badminton, shuttle in Badminton Court	2 min	5	2 min
	Hamstring Stretch	2 min	5	2 min
<b>V<sup>th</sup> and VI<sup>th</sup> weeks of flexibility and co-ordination exercises</b>				
Monday	Trunk Twisting	2 min	5	1 ½ min
Tuesday	Rope Skipping	2 min	5	1 ½ min
Wednesday	Shoulder and Chest stretch	2 min	5	1 ½ min
Thursday	Zig Zag running	2 min	5	1 ½ min
Friday	Alternate toe touch	2 min	5	1 ½ min
Saturday	Hip stretch	2 min	5	1 ½ min
	Stepping with badminton, shuttle in Badminton Court	2 min	5	1 ½ min
	Hamstring Stretch	2 min	5	1 ½ min

experimental group (A) and the other was acted as the control group (B). The experimental treatment were given training programme for 6 weeks, 5 days in a week. Where as no specific training was given to the control group.

20 badminton players of Degree College of Physical Education, Amravati were selected as the subjects by simple random method. The subjects were divided into two equal groups. Those were assigned as experimental group (A) and control group (B).

Experimental treatment was given to the experimental group. The training was of six weeks and five days in a week. The training was given in the evening time for one hour for the first two weeks and than 15 minutes was increased for next two weeks and last weeks the training duration was one hour 30 minutes. No special treatment was given to the control group. The subjects of all the groups were the students of physical education. Hence, they were busy with their regular activities and they also used to play badminton during their badminton period only.

The following training schedule was administrated on the experimental group.

## ■ OBSERVATIONS AND DISCUSSION

The data pertaining to this study were collected on 20 Badminton players of Degree College of Physical Education, Amravati by administrating sit and reach test, shoulder elevation, eye hand coordination, eye foot coordination test. The pretest data were also collected immediate after training programme.

### Statistical analysis and interpretation of data :

The raw scores of each test were converted into t-score by using the following formula and then added all the four t-score to make composite score the sum of all composite score was divided by 2 to form two equated group formula is :

$$T \text{ score} = 50 + 10 \left( \frac{\bar{x} - x}{\bar{x} - \bar{x}} \right) \text{ for timing}$$

$$T \text{ score} = 50 + 10 \left( \frac{x - \bar{x}}{\bar{x} - \bar{x}} \right) \text{ for distance}$$

From the observation of Table 2 it is revealed that than is no significant difference the pre test and post test of control group.

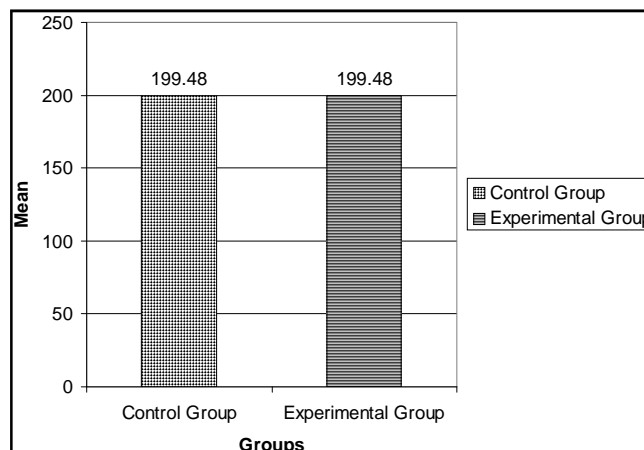
From the observation of Table 3 it was revealed that there is a significant difference between the pre test and post test of Experimental group.

From the observation of Table 4 it was revealed that there is a significant difference between the control group and experimental group.

It has been observed from the result of the findings of this study that the experimental group had shown significant

**Table 1 : Pretest mean of control group and experimental group**

Sr. No.	Name of Group	Pretest means of Composite scores
1.	Control Group	199.48
2.	Experimental Group	199.48

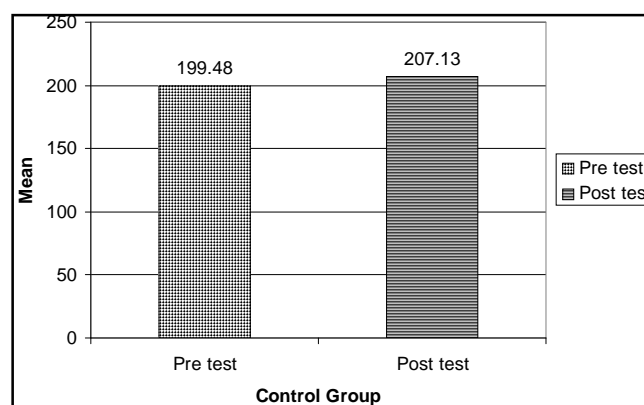


**Fig. 1 : Pretest mean of control group and experimental group**

**Table 2 : Significant of mean difference between pretest and post test of control group**

Test	Mean	SD	MD	SE	t-ratio
Pre test	199.48	18.93	7.65	8.14	0.94*
Post test	207.13	17.46			

\* indicates of significance of values at P=0.1, respectively  
Tabulated  $t_{0.05(9)} = 2.262$



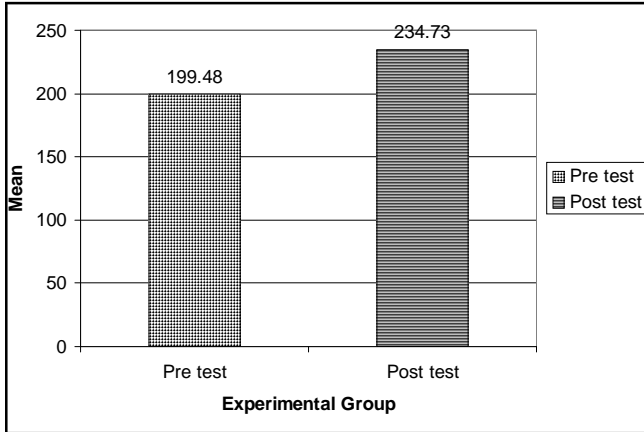
**Fig. 2 : Mean difference between pre test and post test of control group**

**Table 3 : Significant of mean difference between pre-test and post-test of experimental group**

Test	Mean	SD	MD	SE	t-ratio
Pre test	199.48	29.77	35.257	10.83	3.255
Post test	234.73	16.93			

\* indicates of significance of values at P=0.1, respectively



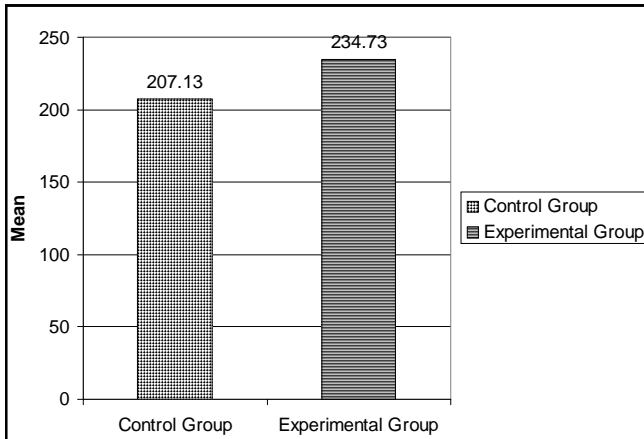


**Fig. 3 : Mean difference between pre-test and post-test of experimental group**

**Table 4 : Significant of mean difference between pre-test and post-test of control and experimental group**

Test	Mean	SD	MD	SE	t-ratio
Control group	207.13	17.46	27.60	7.69	3.589
Experimental group	234.73	16.93			

\* indicates of significance of values at P=0.1, respectively



**Fig. 4 : Mean difference between control and experimental group**

improvement in flexibility and coordinative ability compared to control group, it may be because of due to nature of regular exercise programme. The regular selected exercise programme might have developed the muscle tone, joint mobility and neuro muscular coordination. Hence a significant improvement in the performance has shown the selected subjects.

Ray (1972), Uppal and Singh (1985) and Welsch (1966) also worked on the related topic and the results more or less coincides with the given result.

**Conclusion :**

Within the limitations of the standard on the basis of the findings the following conclusions are drawn.

- Selected exercises improved the co-ordination and flexibility of Badminton players significantly.
- The control group which engaged in daily physical activity did not show significant improvement in Badminton performance.

**REFERENCES**

**Anzalone, Charlone, B. (1963).** A Manual for Teaching Badminton to Beginners and Inter-mediators, (M.S. in Physical Education).

**Cummingham, David A. (1966).** Effect of breathing high concentration of oxygen on trademill performance. *Res. Quarterly*, 37(4) : 491-494.

**Johnson, Barry L. and Nelson, Jark K. (1982).** Practiced Measurement for Evaluation in Physical Education, 3<sup>rd</sup> Ed, Surjeet Publication, DELHI (INDIA).

**Kansal, D.K. (1996).** Test and Measurements in Sports and Physical Education, DVS Publication, NEW DELHI (INDIA).

**Ray, R. (1972).** A Comparison of the effect of different methods of training of college men. *Dissertation Abstracts Internat.*, 32.

**Uppal, A.K. and Singh, Rajendra (1985).** Effect of Eight Week Participation in Physical Education and Conditioning Programmes on Flexibility, *J. Physical Edu.*, Gwalior, AAHPERD.

**Welsch, James (1966).** The effect of Selected Exercises on Football *Endurance*, Completed Research in Health Physical Education and Recreation, 8.

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