

## Effect of Specific Training Program on Motor Coordinative Ability of Sub-junior Male Badminton Players

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### Abstract

The present study assessed the impact of specific training program on motor coordinative ability of sub-junior male badminton players. To conduct the study, 30 sub-junior male badminton players from Kiran Dhere Badminton Academy, Mumbai were selected as subjects. The age range of the selected subjects was between 11 to 15 years. These selected subjects then divided into two groups i.e. experiment and control group with equal number of subjects assigned randomly in each group. The subjects of experimental group underwent specific exercise training program of eight weeks duration while subjects from control group did not take part in exercise training program. The motor coordinative ability i.e. agility of the selected sub-junior male badminton players was assessed by shuttle run test. Results indicate that eight weeks of specific exercise program has significant impact of motor coordinative ability i.e. agility of selected sub-junior male badminton players. It was concluded that specific exercise program of certain duration is useful in improving the agility of male badminton players performing at sub-junior level.

**Keywords :** Motor coordinative ability, agility, sub-junior male players, badminton

### Introduction:

Like any other sport, mastery in basic skill is also needed to perform well in badminton. But to execute certain basis skills of badminton, a players needs to have good reflex as well as agility to be able to cover the court more efficiently. Hence the role of motor coordinative ability i.e. agility is of paramount importance in badminton. Agility is the ability to exercise a fine coordination of the movements of various parts of the body as well as the ability to relax the muscles which produces a conscious tuning of the muscle tone.

Identifying the importance of motor coordinative ability and motor skills for executing certain skills, number of researchers have analysed the effect of fitness training program on motor skills of sportspersons [Mayhew and Boleach (1986)<sup>1</sup>; Parsons and Jones, 1998<sup>2</sup>; Erelina and Gapeyeva (2001)<sup>3</sup>; Shiferaw et al. (2014)<sup>4</sup>].

As far as studies on badminton players motor skills, aerobic capacity, psychological qualities, biomechanical aspects, motor skills is concerned researchers like Ghosh et al. (1998)<sup>5</sup>, Watanabe et al. (2011)<sup>6</sup>, Jeyaraman and Kalidasan (2012)<sup>7</sup> etc. paid their attention in this direction but surprisingly and especially in India no such study has been conducted in which effect of specific fitness trained program has been assessed on motor coordinative ability of badminton players, hence the present study was planned.

### Objective of the Study

The main objective of the present study is to find out the effect of specific fitness training program on motor coordinative ability of sub-junior male badminton players.

## **Hypotheses**

It was hypothesized that eight weeks exercise training program will significantly improve the motor coordinative ability of sub junior male badminton players.

## **Methodology**

### **Sample :**

To conduct the study, 30 sub-junior male badminton players from Kiran Dhare Badminton Academy, Mumbai were selected as subjects. The age range of the selected subjects was between 11 to 15 years. These selected subjects then divided into two groups i.e. experiment and control group with equal number of subjects assigned randomly in each group. The subjects of experimental group underwent specific exercise training program of eight weeks duration while subjects from control group did not take part in exercise training program.

## **Tools**

### **Shuttle Run**

To assess motor coordinative ability i.e. agility of the selected subjects shuttle run test was used.

The equipments used were two block of wood (2x2x4), a stopwatch and marking powder, Whistle. Two parallel lines were marked on the floor 10 yard apart. The two wooden blocks were placed behind one of the line. The subject was asked to start from behind the other line. On the signal ready? Group, the timer starts the watch and the subjects runs towards the blocks, pick-up one block, runs back to the starting line, runs back and pick-ups the second block to be carried back across the starting line. As soon as the second block is placed on the ground the timer stops the watch and records the time. Two trials were given to each subject with some rest in between. The time of the better of the two trials was recorded to the nearest 10th of a second as the score of the test items.

### **Specific Fitness Training Program:**

A well structured fitness training program was developed by the researcher as per the standard guidelines.

### **Procedure:**

The performance of each subject on shuttle run test was recorded before the start of study period. The subjects of experimental group then subjected to eight weeks specific fitness training program. Specific fitness training program includes warming up for 06 minutes, specific warming up for 05 minutes, training for 45 minutes and 06 minutes for cooling down. In all one hour training program was chalked out which includes high knees, spot running, squat thrust, jump lunges, slow skipping, fast skipping and half squat. The intensity of load during eight weeks of fitness training program and repetition of each item of training battery was determined by standard rules governing fitness training. Sub-junior badminton players of control group performed their usual exercise routine during study period. After study period timings on shuttle run were once again recorded for each subject belonging to experimental and control group. Gain score (Post-pre test) was computed for experimental and control group to find out the changes in shuttle run timings during study period. The obtained gain scores for both the groups were then compared with the help of paired sample 't' test. The results are presented in table no. 1 and 2 respectively.

**Analysis and Interpretation :**

**Table No. 1**  
**Pre and Post-Test Statistics of Shuttle Run Timings in Selected Sub Junior Male Badminton Players of Experimental and Control Group**

Groups	Before Study Period Mean±S.D.	After Study Period Mean±S.D.	't'
Experimental (N=15)	12.84 ± 0.94	12.08 ± 0.79	7.15**
Control (N=15)	14.39 ± 1.80	14.36 ± 1.82	1.58(NS)

\*\* Significant at .01 level; NS - Not Significant

Statistical entries depicted in table 1 indicate no significant change in shuttle run timings of sub junior male badminton players belonging to control group ( $t=1.58$ ,  $p>.05$ ) but shuttle run performance of sub junior male badminton players have improved significantly (less timings in post test as compared to pre test) after eight weeks of specific fitness training program. ( $t=7.15$ ,  $p<.01$ )

The changes in timings on shuttle run test of subjects belonging to experimental and control group during study period was tested with the help of gain score (Post test - pre test). The statistical calculation is presented in table 2.

**Table No. 2**  
**Comparison of Gain Score on Shuttle Run Timings between Experimental and Control Group**

	Experimental Group (N=15)	Control Group (N=15)	't'	Sig.
Gain Score	- 0.76	- 0.03	6.71	.01

A perusal of entries reported in table 2 indicate that time taken to complete shuttle run protocol has decreased significantly in subjects belonging to experimental group ( $M = - 0.76$ ) as compared to subjects of control group ( $M = -0.03$ ).

**Result and Discussion :**

The results clearly indicate the efficacy of a well structured fitness training program to improve motor coordinative ability of sub-junior male badminton players. It shows that a fitness program with standard protocol i.e. intensity of load, specific exercises and time duration can be beneficial for badminton players to enhance their agility.

**Conclusion**

On the basis of results it was concluded that a well organised and implemented fitness training program of certain duration is beneficial sub-junior male badminton players as far as their motor coordinative ability is concerned.

## References

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