



COMPARATIVE STUDY OF REACTION TIME BETWEEN BADMINTON AND BALL BADMINTON PLAYERS

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ABSTRACTS

Researcher studied on comparative study of reaction time between badminton and ball badminton players. The main purpose to compare reaction time between players. Researcher hypothesized that significance difference found in hand reaction time of badminton and ball badminton players. Inter-collegiate participated 10 badminton and 10 ball badminton male players from D.C.P.E., Amravati were chosen as subjects and their age ranged between 18 to 25 years. Only reaction time was chosen as the criterion variables for the study. To select racquet game players purposive sampling method was adopted. Nelson Hand Reaction Time Test was used to measure the reaction time of hand movement in response to a visual stimulus. The response of the subject was analyzed by applying independent t-test for comparing the foot and hand reaction time of the selected games. To test the hypothesis level of significance was kept at 0.05, which is considered significant. Ball badminton Players are superior Reaction Time compared to Badminton Players. It is concluded that the Reaction Time of Ball badminton Players significantly better than Badminton Players.



KEY WORDS:Reaction Time, Ball badminton and Badminton Players.

INTRODUCTION

The time between the application of stimulus and the response is called reaction time. I Visual Reaction Time and Auditory Reaction Time are considered as ideal tool for measuring sensory motor association and also performance of an individual. Reaction time has physiological significance and is considered as a simple and non-invasive test for peripheral as well as central neural structures. Reaction time is broken down into three parts. 1st: Perception time i.e. time for the application and perception of the stimulus including giving the necessary reaction to it. 2nd: Decision time signifies the time for giving an appropriate response to the stimulus. 3rd: Motor time for compliance to the order received. 3, 4 Reaction time depends on several factors i.e. arrival of the stimulus at the sensory organ, conversion of stimulus to a neural signal by sensory organ transmission & processing of neural signal, muscular activation, soft tissue compliance, and the selection of an external measurement parameter. Previous studies have confirmed that reaction to sound is faster than reaction to light, with mean ART being 140-160ms and VRT being 180-200ms. 7,8,9,10 Sports such as badminton, squash, ball badminton & tennis have been classified as reaction sports. Ball badminton is a sport that depends on finely crafted movements that occur very quickly and a precise execution of shots. It is one of the reaction sports that should be appreciated for the mental and physical prowess necessary to compete at a high level.

Statement of the Problem:

Comparative study of reaction time between badminton and ball badminton players.

Purpose of the study:

The main purpose of this study is to compare reaction time between badminton and ball badminton players.

Significance of the Study:

The research of this study will be helpful for the physical education teachers, coaches, and trainers about the vision perception and reaction among the players of the selected games. The result of the present study will be highlighting the difference of reaction time between the selected game players.

Hypothesis:

H₁ There will be significance differences in hand reaction time of badminton and ball badminton players.

Delimitation:

Inter-collegiate participation of 20 male players, 10 from each game (badminton and ball badminton) of D.C.P.E., Amravati were chosen as subjects. The age of the subjects was ranging from 18 to 25 years. Only reaction time was chosen as the criterion variables for the study.

Limitation:

Heredity factor was not considered. Training background of the subjects was not considered. There was no control on daily routine of the selected subjects. Socio-economic factors may be effect the study, so it was not taken into account.

Methodology:

For the study 20 male selected racquet games players of D.C.P.E., Amravati were the source of data. 10 from each selected racquet game were chosen as the subject for the study. Purposive sampling method was adopted for the study. Nelson Hand Reaction Time Test was used to measure the reaction time of hand movement in response to a visual stimulus. The data pertaining to this study were collected on 10 male Badminton and 10 male Ball badminton players by applying Nelson Hand Reaction test and Nelson Foot Reaction test.

Analysis and Interpretation of Data:

The response of the subject was analyzed by applying independent t-test for comparing the foot and hand reaction time of the selected games. To test the hypothesis level of significance was kept at 0.05, which is considered significant.

Table 1
Description of Mean, Standard Deviation, Mean Difference and t-ratio between Badminton and Ball badminton Players

Variable	Group	Mean	S.D.	M.D.	S.E.	t-ratio
Badminton Time	Badminton	106.8	20.21	6.40	4.96	1.29@
	Ball badminton	100.2	12.74			
Ball badminton Time	Badminton	48.02	1.37	3.29	0.37	8.89*
	Ball badminton	44.73	0.67			

@ Not Significant at 0.05 level

Tab $t_{0.05(18)}=2.101$

* Significant at 0.05 level

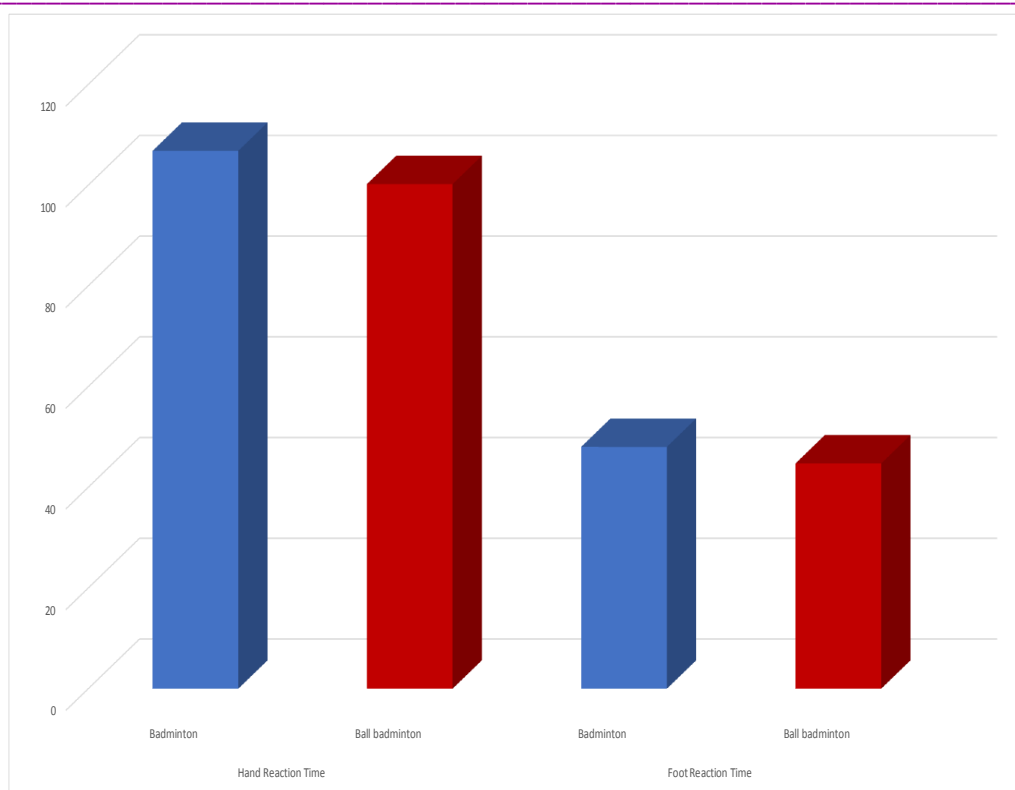


Figure 1: Description of Mean between Badminton and Ball badminton Players

Findings:

Ball badminton Players are superior Reaction Time compared to Badminton Players. Table, hence accordingly take position to defend as well as attack the ball. Results have shown superior performance in Reaction Time by the Ball badminton Players. In the Badminton game the court is quite larger than the Ball badminton board; moreover the speed of move ment of the shuttle is quite slower than the Ball badminton ball. There are, the result shows inferior performance by the Badminton Players. The result of the study further shows that there is significant difference in Reaction Time between Badminton and ball badminton Players.

CONCLUSION:

There was significant mean difference in Reaction Time between the Badminton and Ball badminton players. It is concluded that the Reaction Time of Ball badminton Players significantly better than Badminton Players.

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