



P-ISSN: 2394-1685  
E-ISSN: 2394-1693  
Impact Factor (ISRA): 5.38  
IJPESH 2017; 4(6): 29-31  
© 2017 IJPESH  
www.kheljournal.com  
Received: 09-09-2017  
Accepted: 10-10-2017

**Dr. M Ramajayam**  
Assistant Professor,  
Ramakrishna Mission Vidyalaya  
Maruthi College of Physical  
Education Coimbatore,  
Tamil Nadu, India

**Correspondence**  
**Dr. M Ramajayam**  
Assistant Professor,  
Ramakrishna Mission Vidyalaya  
Maruthi College of Physical  
Education Coimbatore,  
Tamil Nadu, India

## Reaction time on various physical education college of inter collegiate men hockey players

**Dr. M Ramajayam**

### Abstract

Reaction time is the ability to respond quickly with proper posture and control to a stimulus such as sound or sight. In many instances, quickness is more important than straight ahead speed. To achieve the purpose of the present study seventy two subjects were selected various physical education colleges from Tamil Nadu from Selvam college of physical education, YMCA college of physical education, Ramakrishna mission Vidyalaya Maruthi College of physical education, Tamil Nadu Physical Education Sports University, Tamil Nadu. Hockey Inter collegiate tournaments held at Maruthi College of physical education during September- 2017. Each college eighteen players were selected. Their age ranged from 21 to 25 years. The selected criterion variable reaction time was tested using the chronoscope (reaction timer) apparatus. The procedure was repeated for three times and three readings which appeared on the display were noted. The least reading of the three was taken as subject's best reaction time and was recorded in the subject's record profile. The inter stimulus interval was randomly adjusted between 5-10 seconds. The same procedure was followed for determination of visual reaction time (in m sec) for Red and Green stimuli using both hands. The data were collected and treated with ANOVA. If obtained 'F' ratio was significant scheffe's post hoc test was used to find out the paired mean difference. The level of confidence was fixed at 0.05. The results shows that there is significant difference among the inter collegiate men players of reaction time. The Maruthi College of physical education men hockey players better reaction time compared with TNPESU, SELVAM and YMCA college.

**Keywords:** Reaction time, Anova, inter collegiate players

### Introduction

Reaction time is the ability to respond quickly with proper posture and control to a stimulus such as sound or sight. In many instances, quickness is more important than straight ahead speed. Speed of movement and quick reactions are prized qualities in athletics. Reaction time is often overlooked and usually under-estimated element in athletic selection. In sports and games, in which movements of a participant are conditioned by signals, by movements of opponents, or by motion of the ball, reaction time is of great importance. Sports performance is a bio-psycho-social value achieved within some official competitions, as a result of a multiply determined capacity assessed according to some rigorously established criteria or standards. Performance depends on the task-activity-result relationship. Capacity is a multi factorial resultant determined by aptitudes, by the personality maturation degree, by learning and exercise: it can be educated, developed through exercise, or "atrophied" through demobilization, which occurs more often than the physiological function diminution due to the aging process. The purpose of the study was to find out analysis of reaction time on various physical education colleges inter collegiate men hockey players.

### Methodology

To achieve the purpose of the present study seventy two subjects were selected various physical education colleges from Tamil Nadu from Selvam college of physical education, YMCA college of physical education, Ramakrishna mission Vidyalaya Maruthi College of physical education, Tamil Nadu Physical Education Sports University, Tamil Nadu. Hockey Inter collegiate tournaments held at Maruthi College of physical education during September-2017. Each college eighteen players were selected. Their age ranged from 21 to 25 years. The selected criterion variable reaction time was tested using the chronoscope (reaction timer)

apparatus, The procedure was repeated for three times and three readings which appeared on the display were noted. The least reading of the three was taken as subject's best reaction time and was recorded in the subject's record profile. The inter stimulus interval was randomly adjusted between 5-10 seconds. The same procedure was followed for determination of visual reaction time (in m sec) for Red and Green stimuli

using both hands. The data were collected and treated with ANOVA. If obtained 'F' ratio was significant scheffe's post hoc test was used to find out the paired mean difference. The level of confidence was fixed at 0.05.

**Results**

**Table I:** Analysis of Variance on Reaction Time among Various Physical Education College of Inter Collegiate Men Hockey Players

College	Mean	S.D	Source of Variance	Sum of Squares	Df	Mean Square	' F'
Selvam	0.313	0.103	Between	0.459	3	0.153	9.476*
Ymca	0.255	0.128					
Mcpe	0.124	0.046	Within	1.099	68	0.016	
Tnpesu	0.326	0.188					

\* Significant

Level of significant fixed at 0.05 level. Table value 2.76 with df 3 & 68

Table – I shows that reaction time mean values and standard deviation of Selvam, YMCA, MCPE and TNPESU inter collegiate players were  $0.313 \pm 0.103$  and  $0.255 \pm 0.128$  and  $0.124 \pm 0.046$  and  $0.326 \pm 0.188$  respectively. The obtained 'F' value 9.476 which was as greater than tabulated value

2.76 in the level of 0.05. So significant difference among the inter collegiate men hockey players of reaction time. Since the 'F' ratio is significant, scheffe's post hoc test is applied to find out the significant paired mean difference.

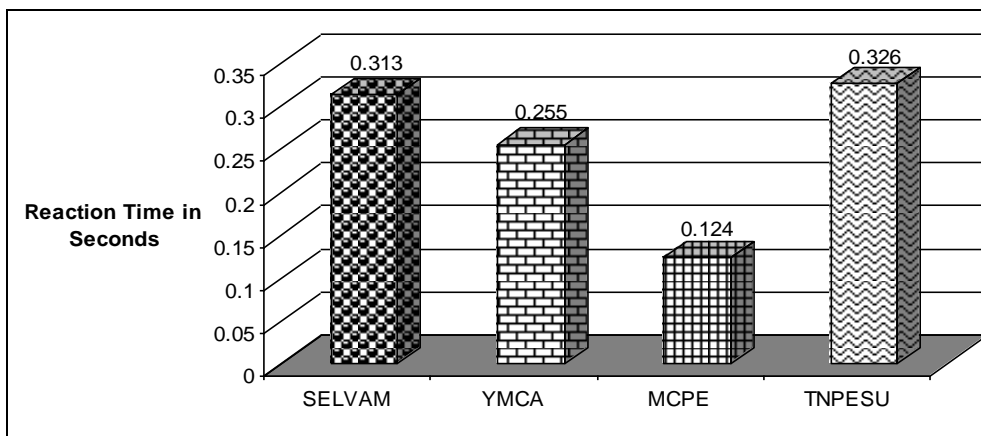
**Table II:** Scheffe's Post Hoc Test for Reaction Time of Various Physical Education College of Inter Collegiate Men Hockey Players

SELVAM	YMCA	MCPE	TNPESU	Mean Diff	C.I
0.313	0.255	-	-	0.058	0.120
0.313	-	0.124	-	0.189*	
0.313	-	-	0.326	0.013	
-	0.255	0.124	-	0.131*	
-	0.255	-	0.326	0.071	
-	-	0.124	0.326	0.202*	

\*Significant

Table-II results shows that scheffe's post hoc test for various physical education college of inter collegiate men hockey players. Reaction time on various colleges of SELVAM, YMCA, MCPE and TNPESU inter collegiate hockey players. The reaction time of there is significant difference between

SELVAM compared with MCPE, YMCA compared with MCPE and MCPE compared with TNPESU and there is no significant difference between SELVAM compared with YMCA and TNPESU.



**Fig 1:** The Mean Values of Reaction Time of Various Physical Education College of Inter Collegiate Men Hockey Players

**Discussion on Findings**

Based on results of the study statistically proved that significant difference among the various physical education colleges of inter collegiate men hockey players of reaction time. The results conformity with that other studies, Romanians as well had performed studies regarding the reaction time and revealing important aspects such as: the reaction time improves along with the athlete's brain maturation, according to an ascendant dynamics, starting from the age of 6-8 years old, and it reaches maximal values at the

age of 20-30 years old, then it slowly decreases until the age of 65-70 years old (Dragnea, 1996) [2], with 5 ms every 5 years, and significantly decreases after this age (Deliu, 2001) [3]. The reaction time relation to sports performance in karate (Macovei Sabina *et al.*, 2013) [4]. Sprinters were better in both auditory reaction times ( $P < 0.001$  for both tests) (Leila *et al.*, 2012) [5]. Athletes are better reaction time compared with non sports men (Ajay *et al.*, 2013) [1]. Athletes performed better than controls for auditory as well as visual reaction time tasks (Prabhjot Kaur 2006) [6].

### Conclusions

- There is significant difference among the various physical education colleges inter collegiate men hockey players of reaction time.
- Maruthi College better reaction time compared with TNPESU, YMCA and SELVAM college.

### References

1. Ajay M, Gavkare, Neeta L, Nanaware, Anil D. Surdi Auditory Reaction Time, Visual Reaction Time and Whole Body Reaction Time in Athletes Indian Medical Gazette athletes are better reaction time. 2013, 214-219
2. Dragnea A. Antrenamentul sportiv, Editura Didactică și Pedagogică, R.A., București Journal of Romania. 1996, 173.
3. Deliu D. Rolul reacției motrice în diagnoza, prognoza și desfășurarea procesului de învățare și perfecționare a tehnicii din artele marțiale. Teză de doctorat, Anefs, Journal of Romania. 2001, 64.
4. Macovei Sabina, Lambu Elena-Andreea, Lambu Ioana-Sorina. Study About The Reaction Time Relation to Sports Performance in Karate Do. Science, Journal of Movement and Health. 2013; XIII, 2-13(2):228-233
5. Leila Nuri, Azadeh Shadmehr, Nastaran Ghotbi, Behrouz Attarbashi Moghadam. Reaction time and anticipatory skill of athletes in open and closed skill-dominated sport, European Journal of Sport Science. 2012; 13(5):431-436.
6. Prabhjot Kaur. Auditory and visual reaction time in athletes, healthy controls, and patients of type I diabetes mellitus: A comparative study, International Journal of Diabetes Countries. 2006; 26(3).