

**Visual Motor Skills in Injured vs Non-Injured cricketers: An  
Observational Comparative Study**

by

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In partial fulfilment of the requirements for the degree of **Master**

**of physiotherapy (M.P.T)**

in

**Sports**

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## **LIST OF ABBREVIATIONS USED**

- **BMI**-Body Mass Index
- **EHC**- Eye Hand Coordination
- **VRT**-Visual Reaction Time
- **RDT**-Ruler Drop Test
- **AHWTT**-Alternate Hand Wall Toss Test

**ABSTRACT**

**Title:** Visual Motor Skills in Injured vs Non injured Cricketers: An observational comparative study.

**Background & Objectives:** Cricket players depend on sharp vision and quick body movements to perform well. When a player is injured, their coordination and reaction time may be affected, which can lower performance. Studying these changes can help coaches and health professionals plan better training and recovery programs. This research aims to compare the visual–motor skills of injured and non-injured cricketers to find out if injuries causes any differences in VRT and EHC , and to use this information to improve injury prevention and rehabilitation.

**Methods:** The study involved 50 participants (male ) aged 15-30 years, . There are two groups i.e Injured and non injured on which the test is conducted. The tests were conducted using the (ruler drop test) for visual reaction time and (alternate hand wall toss test) for eye hand coordination. VRT consisted of two components: average score on a ruler (in cm, up to 30 cm) and reaction time calculated in seconds. The test results were statistically analyzed using unpaired t-tests in SPSS 25 Software.

**Results:** The visual reaction time ( Ruler drop test ) mean for non injured group is 0.1536 seconds which is better as compared to injured group i.e 0.2010 seconds .(mean difference: 0.047 s ,  $p < 0.001$ ), and the eye hand coordination (alternate hand wall toss test) mean for non- injured group is 17.48 catches which is better as compared to injured group i.e 11.84 catches (mean difference: 5.64  $p < 0.001$ ).

**Conclusion:** The study shows that visual–motor skills differ between injured and noninjured cricketers when being compared. Injuries appear to slow down the reaction time and coordination of cricketers. These findings highlight the need for focused training and

rehabilitation to protect visual–motor abilities and improve players’ performance and recovery.

**Keywords:** visual reaction time, Hand eye coordination , cricketers, Injured, Non-injured

## **TABLES OF CONTENTS**

<b>SLNO.</b>	<b>CONTENTS</b>	<b>PAGE NO.</b>
1	Introduction	15-18
2	Need of the study	19-20
3	Aim of the study	21-22
4	Objective of the study	21-22
5	Hypotheses	23-24
6	Review of literature	25-28
7	Methodology	29-30
8	Procedure	31-37
9	Statistical analysis	38-39
10	Results	40-44
11	Discussion	45-47
12	Conclusion	48
13	Limitations & Recommendations for future study	49

14	Summary	50
15	Statement of Funding	51
16	References	52-54
17	Annexures	55-61

### **LIST OF TABLES**

<b><u>SL. No</u></b>	<b><u>Table</u></b>	<b><u>Page no.</u></b>
1	Standard data of ruler drop test	32
2	General Score of Alternate hand wall toss test	35

## **LIST OF FIGURES**

<b>SL. No</b>	<b>Figure</b>	<b>Page no.</b>
	Flow Chart of the Study Procedure	31
	Ruler drop test	34
	Alternate Hand Wall Toss Test	36

## **LIST OF GRAPHS**

<b>SL.No</b>	<b>Figure</b>	<b>Page no.</b>
	Graphical Representation of Mean Age and Mean BMI	41
	Graphical Representation of Normality for(VRT) &(EHC)	42
	Graphical representation of VRT score between group comparison	43
	Graphical representation of EHC score between group comparison	44

# INTRODUCTION

**Visual motor skills in injured vs non injured cricketers- An observational comparative study**

## Introduction

Cricket is a global sport traditionally popular in the commonwealth nations but now being played in 105 member countries of the International Cricket Council. 7

Cricket is the world's second-most popular spectator sport after football and has captivated people of every age, gender, background, and ability for more than 400 years.

A bat-and-ball game with complex rules, cricket involves physical fitness, skill, and strategy. 7,8

Cricket is played on a rectangular pitch centered on an oval field, with eleven players on a team. Each side includes batsmen, bowlers, fielders, and a wicketkeeper.7 Visual

motor skills plays a crucial role in cricket performances as they directly influence a player's ability to perceive visual cues and respond with precise motor actions.<sup>3</sup>

Visual motor skills are crucial in cricket as they enable players to accurately perceive and respond to visual stimuli, such as the trajectory of the ball. In the context of the upper limb, strong visual motor skills contribute to effective hand-eye coordination and reaction time, which is essential for batting, bowling, and fielding in cricket. Players with well-developed visual motor skills are often able to anticipate the ball's movement more accurately, leading to better performance in various aspects of the game. Additionally, training programs that target visual motor skills can help enhance overall athletic performance and reduce the risk of injuries related to poor coordination. <sup>10, 13</sup>

Visual motor skills can be better understood in the form of Hand-eye coordination and visual reaction time. <sup>9</sup>

Hand-eye coordination is the ability to perform activities that require the simultaneous use of our hands and eyes, such as catching a ball or throwing a ball. <sup>1,7</sup>

Hand-eye coordination depends on three systems: the gaze system, which is responsible for locating and fixing task-relevant objects, the motor system of the limbs to transport out the task, and the visual system will provide information to the other two. <sup>2</sup>

Visual reaction time is the time taken by athletes to react to a visual stimulus.

Visual reaction time among athletes is primarily concerned with how fast

An athlete responds to a visual stimulus. Previous researchers defined visual reactions.

Time is defined as the interval between the abrupt presentation of a stimulus and

The start of the motor response is measured in seconds (s). It determines

A person's alertness refers to how quickly they respond to a stimulus. 5, 9

Fielding in cricket requires precise hand eye coordination and quick reactions to judge the trajectory of the ball, anticipate its movements, and position accordingly to take a catch or stop the ball. 10

Injuries can certainly impact a cricketer's visual motor skills, which are crucial for tasks like batting, bowling, and fielding. Injuries, particularly those affecting the eyes, hands, or any part of the body involved in cricket actions, can disrupt the coordination and reaction time leading to decreased performance or difficulty in executing cricketing techniques accurately and overall performance on the field. 6

Upper-limb injuries (51%) occur very frequently in sports. The most common type of injuries was overuse injuries (45.8%). Bowling (41.3%), fielding (47.2%), and wicket keeping (28.6%) account for most injuries. 6,7

Injured cricketers may experience decreased performance due to physical limitations, pain, or the need to adjust their playing style to accommodate the injury. This can affect their batting, bowling, and fielding abilities, leading to reduced effectiveness on the field. 7

However, not all injuries have the same impact on performance. Some injuries may be minor and have minimal effect on a player's abilities while injured cricketers still contribute to their team's performance,

On the other hand, non-injured cricketers are able to perform at their optimal level without any physical obstructions. 6

## **NEED OF THE STUDY**

## **Need of the study**

- The findings of this study will provide valuable insights into the impact of injuries on performance and also any deficits in visual motor skills caused by injuries.
- Comparing these skills between injured and non-injured players will give a better understanding of the role of visual motor skills in cricket performance ,injury prevention and rehabilitation.

## **AIM&OBJECTIVES**

### **Aim of the study**

The aim of the study is to observe and compare the visual motor skills like Visual reaction time and Eye hand coordination between injured and non-injured cricketers to understand the impact of injuries on these skills and how they may/may not affect performance in cricket.

### **Objectives of the study**

- To assess visual motor skills i.e Eye hand coordination and visual reaction time in non injured and injured cricketers by using alternate hand wall toss test and ruler drop test.
- To compare visual motor skills in injured and non injured cricketers.

## **HYPOTHESES**

## Hypotheses

- **Null Hypothesis :** There will be no significant differences in visual motor skills between injured and non injured cricketers.
- **Alternative Hypothesis :** There will be significant differences in visual motor skills between injured and non injured cricketers.

## **REVIEW OF LITERATURE**

## Review Of Literature

• **G. Shivaji et.al (2013)** conducted a study on “**Effect of Visual Skill Fitness Training Programme on Selected Psychomotor Variables of Male Cricket Players**” in which 30 players were selected randomly as subjects for this study. The subjects selected were assigned randomly into two groups namely experimental group-1 as Visual Skills Fitness Training Group (VSFTG), and conventional training control group, consisting of 15 each. The subjects of two groups were measured on the following variables: eye-hand coordination and visual reaction. The Visual Skill Fitness Training Group (VSFTG) underwent visual skill fitness training programme for 2D/ week for about twelve weeks. The results of the study showed that experimental group shows better improvement on selected psychomotor variables when compared to control group.

• **Dan Alexandru SZABO et.al (2021)** conducted a study on “**Testing the reaction speed in children aged between 14-15 years**” which consists of performing test, namely the Ruler drop test , which aims at the reaction speed of the dominant and non-dominant hand of the subjects. 74 male children were taken . The test was conducted on all the 74 children who were participating and not participating in sports. The study showed that the dominant hand have a higher reaction speed than the non-dominant hand of the children participating in sports rather than the non participants.

•**Maruth Sukmooncharen.A.L Prak et.al (2022)** conducted a study on “**Effects of Visual Training on the Reaction Time among Badminton Athletes**” This study aims to identify to identify the effects of visual training on the reaction time among badminton athletes using reaction time test, namely, the Finger Reaction Time (FRT).According to the findings of this study, it is concluded that there is a difference in the reaction time of the treatment group as well as the control group after undergoing intervention training for the past eight weeks. In addition, the findings of the study also indicate that visual training does affect a person's reaction time as well.

• **Dinshaw N. Pardiwala et.al (2017)** conducted a study on the “**Injuries of cricket** ” which shows prevalence of injuries has increased due to game format changes, increasing number of matches played, and decreased rest between matches. Bowling (41.3%), fielding, and wicket keeping (28.6%) account for most injuries. Acute injuries are most common (64%-76%), followed by acute-on-chronic (16%-22.8%) and chronic ones (8%-22%).

• **Ravi Sharma et. al (2018)** conducted a study on “**Effect of 8 - weeks coordination training on visual pursuit of young cricket players**” A total of 16 male (8 players in each group) cricket players age ranged from 12-15 years. The experimental group participated in training program done by Alternate Hand wall Toss Catch. No treatment was given to control group. The training programme was carried out for a total duration of eight weeks. Duration of training programme was of 45 minutes. From the first week to the eighth week, the volume of training load and training increased gradually for the experimental group. The results concluded that coordination training of 8-week is effective to improve visual pursuit.

• **Mandeep S Dhillon et al (2012)** conducted a study on “**Nature and incidence of upper limb injuries in professional cricket players a prospective observation**” 95 cricket players were prospectively evaluated for nature and incidence of upper limb injuries from 1st November 2008 to 31st October 2009. Out of 95 players evaluated, 24 were bowlers, 19 were batsmen, 8 were wicket keepers and the other 44 cricketers declared themselves as all rounders. There were a total of 16 upper limb injuries in 16 (16.8%) players. The majority of injuries (10/16) occurred while fielding. Out of 16 injuries, 11 were seen in hand, 3 were observed in elbow, while 2 patients suffered from shoulder problem. The results concluded that the incidence of upper limb injuries in cricketers at the professional

and semiprofessional level is significant, causing them to miss matches or practice for a significant number of days

## **METHODOLOGY & PROCEDURE**

## **Methodology**

- **Study design:** observational comparative study
- **Study population:** cricketers
- **Sampling technique:** Purposive sampling
- **sample size:**55 as per G\*power software
- **Study setting:** ABSMARI, Pahala and Different clubs in and around bhubaneswar and cuttack.
- **Study duration:** 1 year
- **Ethical clearance** - 6 months
- **Sample selection, data collection-** 4 months
- **Statistical analysis, results, discussion-** 2 months

### **Inclusion criteria**

- Age 15-30 years
- Gender Male
- Club level cricketers confirmed by the authorities
- Upper extremities injured cricketers (overuse)
- Injured players returned to sports within 6 to 12 months
- Non injured cricketers

### **Exclusion criteria**

- Female cricketers
- Lower limb injured cricketers
- Head injury
- Spinal injury
- Any recreational player

### **Materials used**

1. Tennis ball

2. Wooden ruler scale

3. Stopwatch

4. Pencil/Pen

5. Table and chair

## **Procedure**

Ethical clearance was obtained from the institutional ethical committee.



NOC was taken from Union Sporting Club, Cuttack



Players were selected based on inclusion criteria.(5 players excluded , did not met criteria)



Procedure were explained to all the participants in the study in their vernacular language



Informed consent form was obtained from the participants.



Demographic data was obtained which included (name, age, gender, address, years of playing cricket,)



Participants were allocated into two groups i.e injured and non injured groups



Test were performed to both the groups



All data was recorded and analysed using the latest version of SPSS(version 25)

## Outcome Measures

### **1. VRT (Visual Reaction Test)- (Ruler drop test)**

Testing Procedure: The goal of this test is to monitor athletes' reaction time.

Equipment required -Meter stick / ruler ,Table and chair.

The therapist placed the ruler between the athlete's dominant hand's outstretched index finger and thumb, so that the top of the athlete's thumb is leveled with the ruler's zero centimeter line.

When the ruler was released, the therapist instructs the athlete to grab it as soon as possible.

The athlete gripped the ruler with his index finger and thumb as soon as the therapist loosens it.

The therapist detected the measurement between the bottom of the ruler and the top of the athlete's thumb, where the ruler has been caught.

The test was performed twice and the mean value was evaluated in evaluation.

The following standard data was used for this test.

<b>Rating</b>	<b>Score (30 cm)</b>
Excellent	<7.5 cm
Above Average	7.5cm-15.9cm
Average	15.9cm-20.4cm

Below Average	20.4cm-28cm
Poor	>28cm

**Table1 : Standard data of ruler drop test**

The algorithm to calculate the reaction speed is:

$$d = Vt + \frac{1}{2}at^2 \quad t = \sqrt{2d/a} \quad d =$$

**distance in centimeters V = initial**

**velocity = 0 a = acceleration due to**

**gravity = 9.81 t = time in seconds**



**Fig.1: Ruler drop test**

## 2. EHC ( Eye Hand Coordination Test)-(ALTERNATE HAND WALL TOSS)

ALTERNATE HAND WALL TOSS test was an assessment tool for hand-eye coordination and response time.

Participants threw a ball against the wall with one hand during axillary movements and try to catch it with the other hand.

Purpose: To measure hand-eye coordination

Equipment required: Tennis ball, smooth and solid wall, measuring tape, stopwatch

Procedure: Placed a mark 2 meters distance from the wall.

The athlete was standing behind the line, facing the wall.

The ball was thrown towards the wall in an underarm motion from one hand and tried to catch it with the other hand. Then again threw the ball back to the wall and catch it with the dominate hand .

Scoring: This table lists the general scores of the wall throw test based on the number of successful catches in 30 seconds

Rating	Score in (30 second)
Excellent	>35
Good	30-35
Average	20-29

Fair	15-19
Poor	<15

**Table 2: General Score of Alternate hand wall toss test.**



**Fig.2: Alternate Hand Wall Toss Test**

### SAMPLE SIZE ESTIMATION

The Sample Size was calculated using the G\*power Software with,

**Effect size (Cohen's d) = 0.70  $\alpha$  err prob = 0.05**

**Power (1- $\beta$  err prob) = 0.80**

The total sample size calculated was 55.

N.B (5 players excluded , didn't met the criteria)

# STATISTICAL ANALYSIS

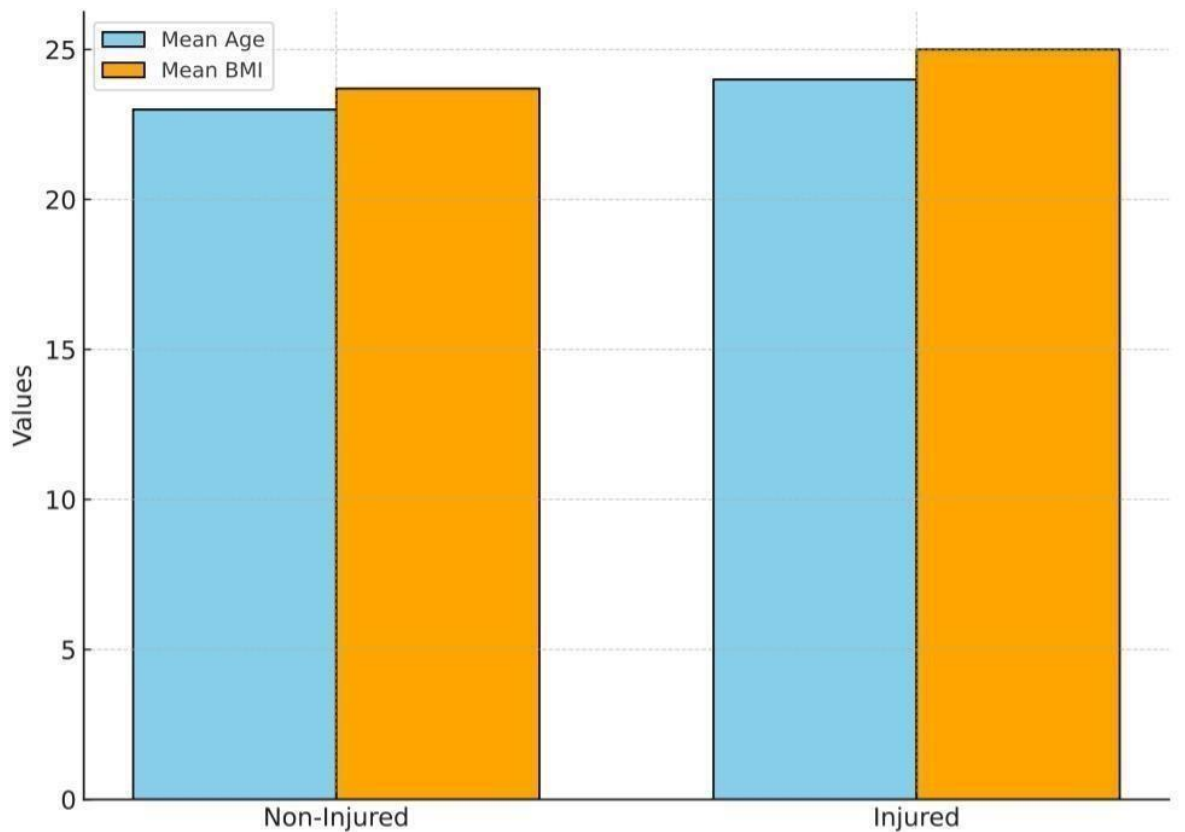
## Statistical Analysis

- Data collected in fragmented form was presented in an orderly manner and tabulated form in Excel.

- Statistical Analysis was performed using SPSS statistical package of social sciences version 25.
- The normality of the data was found using Shapiro-Wilk Test.
- The sample were normally distributed, the mean and standard deviation between the groups was found using unpaired t-test.
- The level of significance (p-value) kept at  $\leq 0.001$ .

# **RESULTS**

## **Results**



**Figure 1. Graphical Representation of mean age and mean bmi**

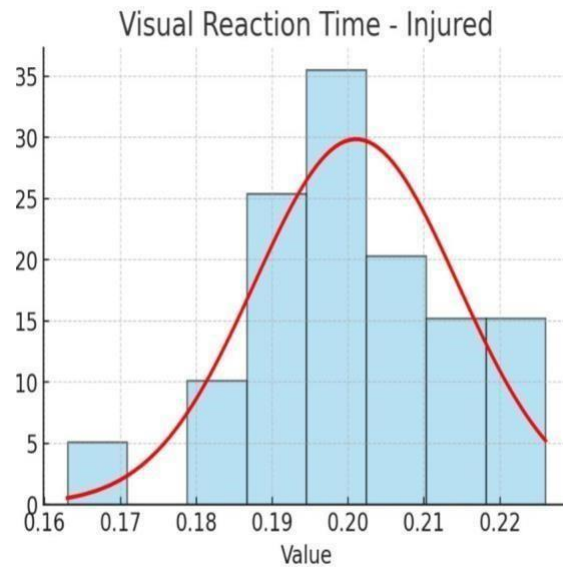
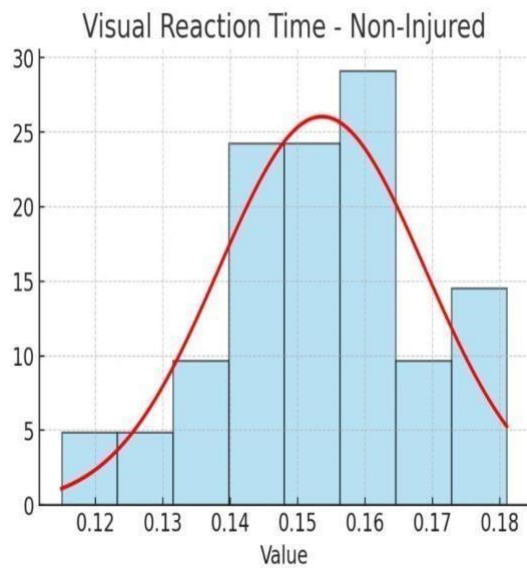
The current study included 50 participants aged 18 years to 30 years.

Figure 1 represents the Mean Age and Mean BMI of 25 non- injured players and 25 injured players.

The mean age and bmi of non- injured players are  $23.0 \pm 2.5$  and  $23.7 \pm 1.0$ .

The mean age and bmi of injured players are  $24.0 \pm 2.7$  and  $25.0 \pm 1.1$ .

On comparing this data the mean age and bmi of non injured players are less than injured players.

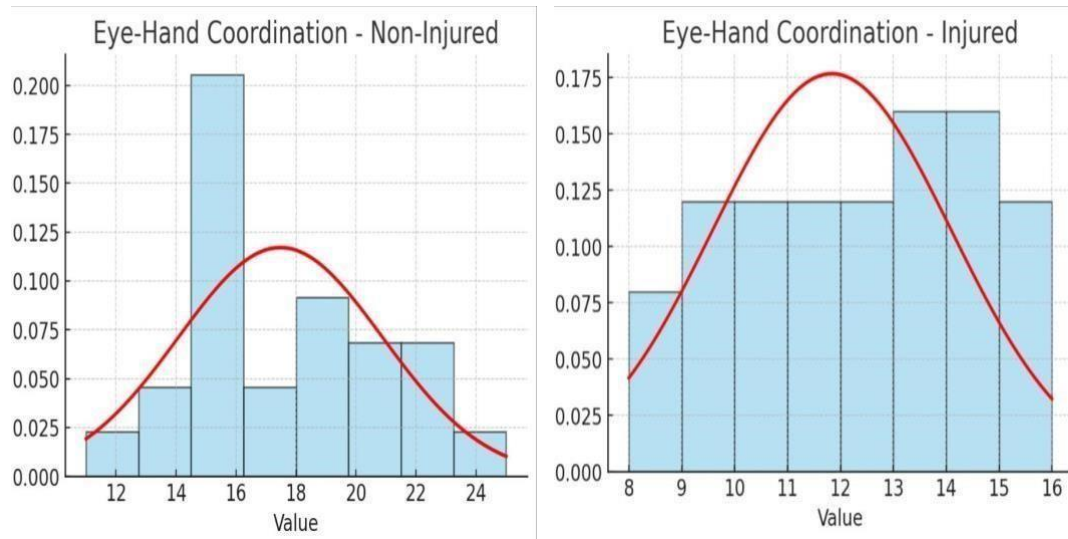


**Figure 2. Graphical Representation of Normality (For visual reaction time)**

This figure 2 represents the data are normally distributed where p value for non – injured group and injured group are 0.438, 0.613. So the p value is  $> 0.05$ .

Rejecting null hypothesis.

Here the curve is bell shaped.

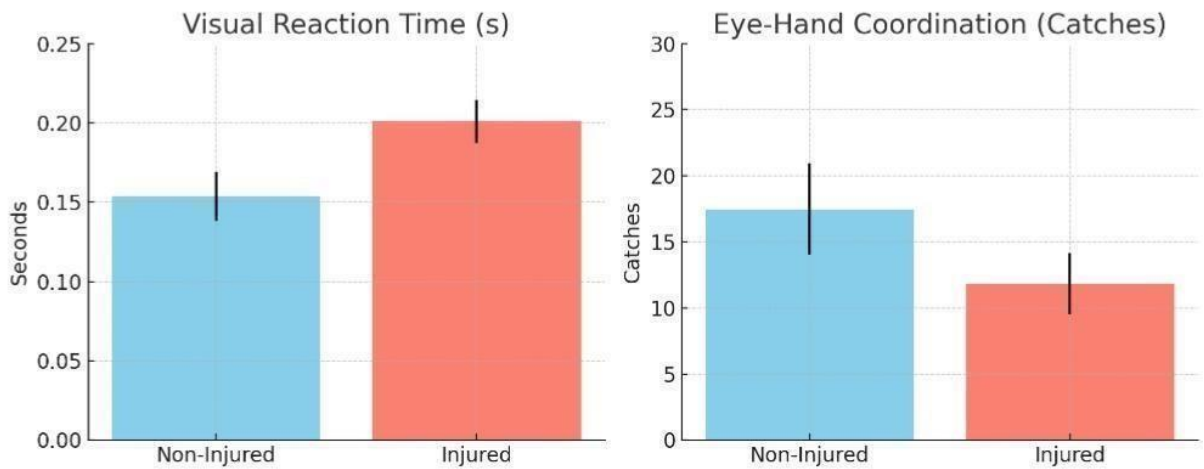


**Figure 3. Graphical Representation of Normality (For Eye hand coordination )**

This figure 2 represents the data are normally distributed where p value for non – injured group and injured group are 0.441, 0.353. So the p value is  $> 0.05$ .

Rejecting null hypothesis.

Here the curve is bell shaped.



**Figure 4. Graphical Representation of VRT & EHC between group comparison**

The study analyzed the impact of visual motor skills in injured and non injured cricket players using two outcome measures: For visual reaction time (Ruler drop test) and For Eye hand coordination (alternate hand wall toss test).

The visual reaction time( Ruler drop test ) mean for non injured group is 0.1536 seconds which is better as compared to injured group i.e 0.2010 seconds . (mean difference:0.047 s ,  $p < 0.001$ ), and the eye hand coordination (alternate hand wall toss test) mean for non- injured group is 17.48 catches which is better as compared to injured group i.e 11.84 catches (mean difference: 5.64  $p < 0.001$ ).

# **DISCUSSION**

## **Discussion**

The present study aimed to evaluate the visual motor skills in injured and non injured cricketers aged 18-30 years. Reaction time and Eye hand coordination is a critical factor in sports performance,

particularly in sports like cricket , where the ability to quickly respond to visual stimuli can significantly influence the outcome of the game.

By utilizing two distinct outcome measures—the Ruler Drop Test (VRT) and the Alternate Hand wall Toss Test (EHC)—this study provides a thorough assessment of these targeted skills can improve the performance. The study involved 50cricket players aged 18-30 years., participants underwent these skill tests using two outcome measures: the Ruler Drop Test (RDT), for visual reaction time, measuring the average distance (in centimeters) and calculating reaction time (in seconds), and the alternate hand wall toss test for eye hand coordination .

These outcome measures assessed and compared the visual motor skills between injured and non – injured cricket players.

According to the findings,the visual reaction time( Ruler drop test ) for non injured group i.e 0.1536 seconds which is better as compared to injured group i.e 0.2010 seconds with a (mean difference:0.047 s ,  $p < 0.001$ ), and the eye hand coordination (alternate hand wall toss test) for non-injured group is 17.48 catches which is better as compared to injured group i.e 11.84 catches (mean difference: 5.64  $p < 0.001$ ).

According to findings the mean age and bmi of non- injured players are  $23.0 \pm 2.5$  and  $23.7 \pm 1.0$ . The mean age and bmi of injured players are  $24.0 \pm 2.7$  and  $25.0 \pm 1.1$ .

On comparing this data the mean age and bmi of non injured players are less than injured players.

players without injuries performed better on both measures than players with injuries. Injured cricket players showed slower reactions and worse coordination, while non-injured players showed quicker reaction times and more successful catches.

The results highlights that age and physical fitness is a crucial factors for injury and performance.

The results also highlight the broader role of visual motor skills in cricket performance. Since batting, bowling, and fielding all depend heavily on quick reactions and precise eye–hand coordination, deficits in these skills could reduce efficiency on the field and increase the risk of further injury. Therefore, visual motor testing may serve as a useful screening tool to identify athletes at risk of poor performance or re-injury.

## **CONCLUSION**

This study concluded that cricketers with injuries had slower reaction times and weaker eye–hand coordination compared to those without injuries. The choice of RDT (VRT) and AHWTT (EHC) as outcome measures proved effective due to their accessibility and cost-effectiveness, making them suitable for practical application in various training settings. This study demonstrates monitoring

visual motor skills will help identify players who are at higher risk of injury, allowing for early intervention.

The study also concluded that there is a significant difference in visual motor skills in injured vs non injured cricketers.

Even non-injured cricketers will get benefit from visual motor skill training as part of their conditioning program, for quicker reaction times and better coordination.

Visual motor skill assessment guide safe return-to-sport protocols, ensuring players have regained not only physical strength but also visual –motor readiness.

Overall, the study highlights the importance of identifying the impact of injuries on visual motor skills and helping the coaches, trainers, physiotherapist integrate these methods in athletic program to enhance reaction time accuracy and eye hand coordination ultimately improving sports performance.

## **Limitations**

While the results of this study are promising, several limitations must be considered. The sample size of 50 participants, while adequate, is relatively small, and the intervention 18-30 years may limit the generalizability of the findings to other age groups. Additionally, the study focused exclusively on cricket players, which may limit the applicability of the results to athletes in other sports.

## **Recommendations for future study**

Future research should aim to replicate these findings in a larger and more diverse sample, including athletes from different sports and age groups.

Explore whether the interventions have different effects for males and females.

Moreover, exploring the impact of these skills on other sports like volleyball, kabaddi, boxing etc.

The study highlights the importance of identifying the impact of injuries on visual motor skills and will help the coaches, trainers, physiotherapist integrate these methods in athletic program to enhance reaction time.

## **Summary**

This study explored how injuries affect visual motor skills in cricketers by comparing injured and noninjured players. Two simple tests were used: the ruler drop test to measure visual reaction time and the alternate hand wall toss test to measure eye–hand coordination.

The findings showed that injured cricketers had slower reaction times and fewer successful catches compared to their non-injured teammates. These differences were not only statistically significant but also large in practical terms, highlighting that injuries can influence both the physical abilities and the perceptual–motor skills that are vital in cricket

By understanding this link, coaches, physiotherapists, and sports scientists can pay more attention to visual motor training during rehabilitation and performance programs. Improving these skills may help players return to sport safely, reduce re-injury risk, and enhance overall performance on the field.

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# ANNEXURE

## Annexure 1 CONSENT FORM

### TITLE:-VISUAL MOTOR SKILLS IN INJURED VS NON INJURED CRICKETERS – AN OBSERVATIONAL COMPARATIVE STUDY

I \_\_\_\_\_ (name of the participant) willingly and

voluntarily agree to participate in the research study under the direction of

**Mr Satyashree Debasish** and is mentioned in his study which is taking place under the

Guidance of Dr.**Asifuzzaman Shahriyar Ahmed** Associate Professor, Abhinav Bindra

Sports Medicine And Research Institute (ABSMARI)

I understand that the purpose of the study is to see **“Visual Motor Skills in Injured vs Non**

**– cricketers-An observational comparative study”**. I understand there is no risk involved

to my health and if any, it is being explained to me. I understand that I have the right to seek information regarding the study and contact Mr.Satyashree Debasish. I understand that my confidentiality and anonymity are protected and further I have the right to terminate my participation at any time without giving any reason. I have read and received a copy of this consent.

-----  
(Name and signature of participant)  
Place:Odisha Date:

-----  
(Name and signature of Investigator)

**ANNEXURE-2**  
**PROFORMA**

Name:-

Age:-

Gender:-

Contact No:-

Playing Experience:-

Hand Dominance:-

Height:-

Weight:

	Non injured	Injured
VRT		

Attempt 1		
Attempt 2		
Mean		
RT (sec) $d = vt + \frac{1}{2}at^2$		
EHC		

-----

Name and Sign of Participant


Place: Odisha

Date:

-----

Sign of Investigator

**ANNEXURE-3**  
**ETHICAL CLEARANCE LETTER**



**ABSMARI**

## ABSMARI ETHICS COMMITTEE

ABHINAV BINDRA SPORTS MEDICINE AND RESEARCH INSTITUTE,  
BHUBANESWAR, ODISHA

CDSCO Reg. No.: ECR/1981/Inst/OD/24

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Prof. (Dr.) E. Venkata Rao  
Chairperson

Mr. Chinmaya Kumar Patra  
Member Secretary

---

Ref. No. ABSMARI/IEC/2025/146

Date: 02/05/2025

---

**APPROVAL LETTER**  
**APPENDIX- VIII**

To,

**MEMBERS**

**Dr. Smaraki Mohanty**  
Clinician

**Dr. Satyajit Mohanty**  
Scientific Member

**Mr. Shib Shankar Mohanty**  
Legal Expert

**Ms. Annie Hans**  
Social Scientist

**Ms. Subhashree Samal**  
Lay Person

**Mr. Deepak Ku. Pradhan**  
Scientific Member

**IEC-SECRETARIAT**

**Mr. Gouranga Ku. Padhy**  
**Mr. Susant Ku. Raychudamani**

**SATYASHREE DEBASISH**  
ABSMARI  
273, PAHAL, BHUBANEWAR-752101

**Protocol Title: Visual motor skills in injured vs non-injured cricketers- An observational comparative study**

**Protocol ID.: ABS-IEC-2025-PHY-069**


**Subject: Approval for the conduct of the above referenced study**

Dear **Mr./Ms./Dr Satyashree Debasish**  
With reference to your Submission letter dated 06/01/2025 the ABSMARI IEC has reviewed and discussed your application for conduct of the study on dated 25/04/2025.

The following documents were reviewed and discussed


S.N.	Documents	Document (Version/Date)
1	IEC Application Form	25/04/2025
2	Informed Consent Form	25/04/2025
3	Undertaking form PI	25/04/2025
4	CRF	25/04/2025
5	COI from the Investigators	25/04/2025


The following members were present at meeting held on 25-04-2025




Dt.....

1

 **Utkal Signature, Plot No.-273,  
Ground Floor, Pahal, Bhubaneswar-752101**

 **+91-63707-03654**

 **iec@absmari.com**

58



# ABSMARI ETHICS COMMITTEE

ABHINAV BINDRA SPORTS MEDICINE AND RESEARCH INSTITUTE,  
BHUBANESWAR, ODISHA

CDSCO Reg. No.: ECR/1981/Inst/OD/24

Prof. (Dr.) E. Venkata Rao  
Chairperson

Mr. Chinmaya Kumar Patra  
Member Secretary

Ref. No. ABSMARI/IEC/2025/110

Date 10-01-2025

## APPENDIX – XV

### IEC ACKNOWLEDGEMENT RECEIPT

MEMBERS
<b>Dr. Smaraki Mohanty</b> Clinician
<b>Dr. Satyajit Mohanty</b> Scientific Member
<b>Mr. Shib Shankar Mohanty</b> Legal Expert
<b>Ms. Annie Hans</b> Social Scientist
<b>Ms. Subhashree Samal</b> Lay Person
<b>Mr. Deepak Ku. Pradhan</b> Scientific Member
IEC-SECRETARIAT
<b>Mr. Gouranga Ku. Padhy</b> <b>Mr. Susant Ku. Raychudamani</b>

Proposal ID: ABS-IEC-2025-PHY-069

Title **Visual Motor Skills in Injured Vs Non-Injured Cricketers- An Observational Comparative Study**

Submitted on: Date 06/01/2025 Time:

Submitted by: **Internal**

Proposal Type: Academic proposal without funding

Investigator's (s) Name:

Dear Dr / Mr./ Ms. **SATYASHREE DEBASISH**

The undersigned do hereby acknowledge that your proposal for the Ethical Review has been received by the I.E.C Secretariat of ABSMARI as on date and time stated above. The Secretariat shall keep you inform about its progress, schedule of the review meeting for presentation as well as the proponent on the result of evaluation as per the SOP.

With best regards

Member Secretary,  
ABSMARI Ethics Committee

ABSMARI ETHICS COMMITTEE



Utkal Signature, Plot No.-273,  
Ground Floor, Pahal, Bhubaneswar-752101

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## ANNEXURE-4 MASTER CHART

Group A Non- injured	Age/Dominance/Gender	VRT(RDT) (c.m)	EHC (AHWTT) (catches in 30 seconds)	Group B Injured	Age/Dominance/Gender	VRT(RDT) (c.m)	EHC (AHWTT)  (catches in 30 seconds)
----------------------	----------------------	-------------------	---	--------------------	----------------------	-------------------	--

1	19/R/M	10.5	20	1	20/R/M	16	15
2	22/R/M	13	16	2	23/R/M	17.5	16
3	21/R/M	16	17	3	22/L/M	18.5	14
4	25/R/M	10.5	19	4	24/R/M	19.5	9
5	20/R/M	15	16	5	21/R/M	20	13
6	23/R/M	10.5	23	6	25/R/M	22.5	10
7	24/R/M	11.5	20	7	19/R/M	21.5	14
8	26/L/M	11	15	8	22/R/M	18	13
9	21/R/M	10	19	9	26/R/M	19	12
10	22/R/M	13	15	10	20/R/M	20.5	11
11	27/R/M	8.5	16	11	24/R/M	17	15
12	19/R/M	10.5	22	12	23/L/M	21	10
13	20/R/M	12	11	13	21/R/M	18.5	14
14	25/R/M	11.5	15	14	27/R/M	22	9
15	23/R/M	7.5	15	15	19/R/M	23.5	13
16	24/R/M	13	17	16	22/R/M	19.5	12
17	21/L/M	9.5	13	17	25/R/M	20	11
18	22/R/M	13	20	18	28/R/M	24	8

19	26/R/M	13.5	13	19	20/R/M	25	10
20	20/R/M	13	15	20	23/L/M	18.5	14
21	28/R/M	11.5	15	21	24/R/M	22.5	9
22	19/R/M	6.5	19	22	21/R/M	21.5	12
23	21/R/M	12.5	23	23	22/R/M	20	13
24	23/R/M	15	18	24	26/R/M	13	11
25	24/L/M	13.5	25	25	23/R/M	19	8

## Annexure 5

### Satyashree Debasish

#### Visual Motor Skills in Injured vs Non-Injured cricketers: An Observational Comparative Study

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