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## **Biren Mahato**

Department of Physical  
Education, Tripura University,  
Tripura, Agartala, Tripura, Pin-  
799022, India.

## **Dr. Krishnendu Dhar**

Assistant Professor, Department  
of Physical Education, Tripura  
University, Agartala, Tripura,  
Pin-799022, India.

## **A comparative study of performance in selected track and field events among state level women athletes of Tripura and west Bengal**

**Biren Mahato, Dr. Krishnendu Dhar**

### **Abstract**

The purpose of study was to compare the performance of selected track and field events among state level female athletes of West Bengal and Tripura. The study delimited to senior (under 20 years) women groups. Further it was also delimited to selected events (viz. 100m and 200m sprint, 800m run, long jump and high jump, shot put, discus throw and javelin throw). Data were collected from 2010 to 2014 sessions by visiting to state athletics associations. The study was concluded with that the performance in sprinting, running, jumping and throwing events, West Bengal athletes were better than Tripura athletes, where as in javelin throw result showed that performance of Tripura and West Bengal athletes was similar.

**Keywords:** Athlete, Performance, Track and Field.

### **Introduction**

Track and field is a sport comprising various competitive athletic contests based on running, jumping, and throwing. Track and Field events are sprints, long distance runs, hurdles, the steeplechase, relays; long jump, high jump, triple jump; shot put, hammer throw, javelin throw, and discus throw. The two most prestigious international track and field competitions are held under the banner of athletics: the Olympic Games and the IAAF World Championships in Athletics. Track and Field is primarily an individual sport grouping together approximately 30 different events, which were formerly divided in to track event (sprints, middle, and long distance run) and field events (jumping and throwing). There are also "combined events" competitions.

### **Purpose of the study**

The purpose of the study was to compare the performance of selected track and field events among state level female athletes of West Bengal and Tripura during the session of 2010 to 2014.

### **Methodology**

The following athletics meet were selected purposively for the study.

- West Bengal state athletics meet and
- Tripura state athletics meet.

Best athletes from different districts and recognized Units of the state perform in these meets.

### **The Data**

Only the performance of First place secured in 100m, 200m sprint, 800m run, long jump, high jump, shot put, discus throw and javelin throw considered as the data for this study.

Only girls under 20 year's group were considered as subject of the study.

Data was collected from 2010 onwards.

### **Procedure of Data Collection**

Data were collected from the records available in West Bengal Athletics Association and Tripura Athletics Association.

### **Correspondence:**

#### **Biren Mahato**

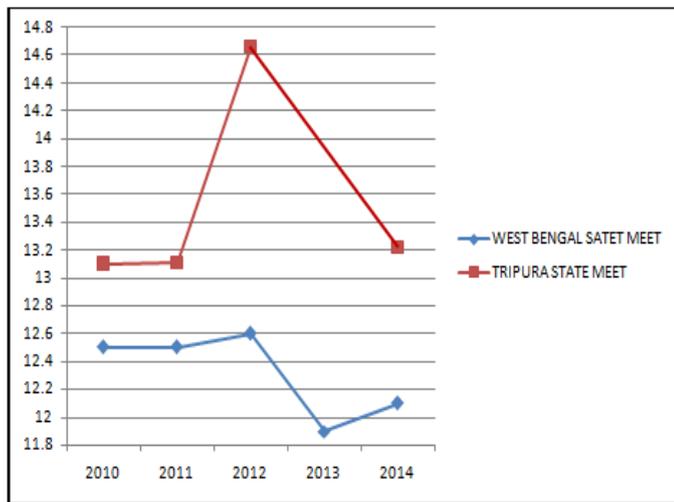
Department of Physical  
Education, Tripura University,  
Tripura, Agartala, Tripura, Pin-  
799022, India.

**Presentation and analysis of data**

Collected data were tabulated and presented in graphical form.

**Table I: 100 m. sprint**

Meet Year	2010	2011	2012	2013	2014
West Bengal	12.5	12.5	12.6	11.9	12.1
Tripura	13.10	13.11	14.66	--	13.22

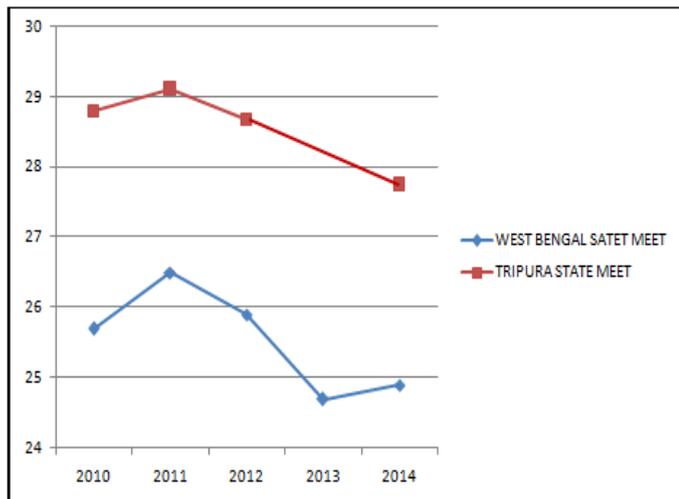


**Fig 1: 100 METER SPRINT Graphical Presentation**

Shows the performance graph of 100 m. sprint. The graph clearly shows that performance of Bengal athletes were much better than Tripura athletes in 100m sprint. It also shows that performance of Bengal's athlete gradually increased in that session and in 2014. On the other hand it was observed that performance of Tripura athlete quite similar in that session, except in 2012. It may be noted that lesser the score, better the performance in running events. The difference between best performances of the states was 1.20 sec.

**Table II: 200 m. sprint**

Meet Year	2010	2011	2012	2013	2014
West Bengal	25.70	26.50	25.90	24.70	24.90
Tripura	28.8	29.12	28.68		27.76

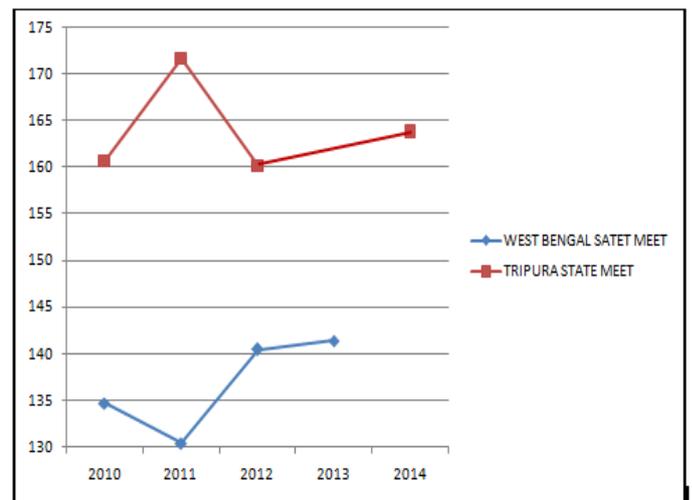


**Fig 2: 200 METER SPRINT Graphical Presentation**

Shows the performance graph of 200 m. sprint. The graph shows that performance of Tripura's athletes in 200 m. sprint was gradually increased in that session, though slightly deteriorate in 2011. The best performance was in 2014. After slight deterioration in 2011 Bengal athletes improves gradually till 2013. Then again it was slightly deteriorate performance observed in 2014. The difference between best performances of the states was 3.06 sec.

**Table III: 800 m. run**

Meet Year	2010	2011	2012	2013	2014
West Bengal	2:14.70	2:10.40	2:20.50	2:21.40	Not held
Tripura	2:40.70	2:51.65	2:40.18	--	2:43.86

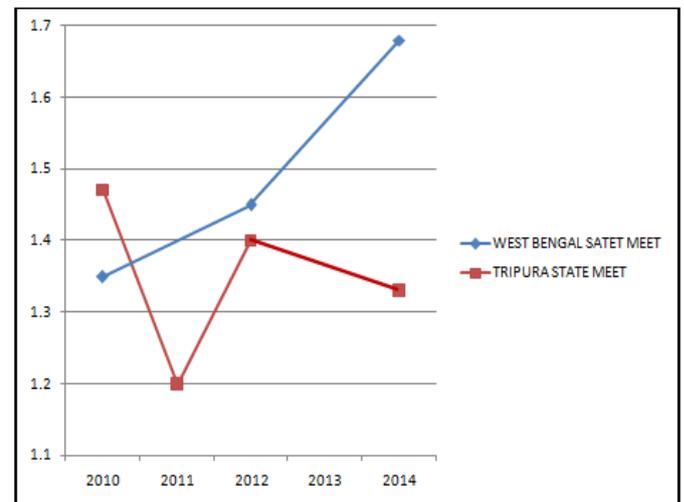


**Fig 3: 800 METER RUN Graphical Presentation**

Shows the 800m running performance by athlete of Tripura after deteriorating in 2011 increased remarkably in 2012, but again in 2014 it deteriorated. The performance of Bengal was increased in 2011 but gradually deteriorate till 2013. The difference between best performances of the states was 30.22 sec. which was a big margin.

**Table No. IV: High jump**

Meet Year	2010	2011	2012	2013	2014
West Bengal	1.35 m.	Failed Trial	1.45 m.	Not held	1.68 m.
Tripura	1.47 m.	1.20 m.	1.40 m.	--	1.33 m.



**Fig 4: HIGH JUMP Graphical Presentation**

Shows that the performance of Tripura's athletes after a great fall in 2011 it was increased in 2012 in high jump. Then again it was slightly deteriorate in 2014. But the best performance of Tripura was observed in 2010. On the other hand Bengals performance graph shows a spurt up to 2014. Though the difference between best performances of the states was 21 cm, the latest performance gap was more than that.

**Table V: Long jump**

Meet Year	2010	2011	2012	2013	2014
West Bengal	5.95 m.	5.23 m.	Not held	5.80 m.	5.86 m.
Tripura	5.09 m.	5.19 m.	5.52 m.	--	4.50 m.

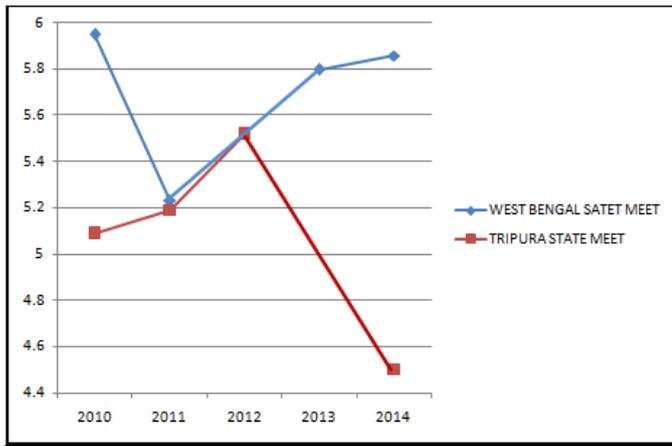


Fig 5: LONG JUMP Graphical Presentation

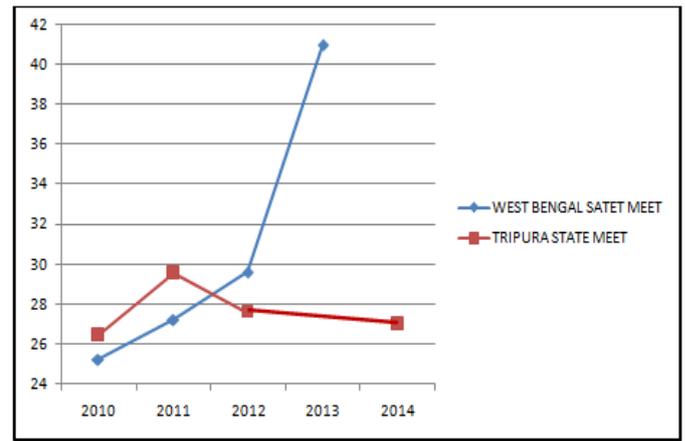


Fig 8: JAVELIN THROW Graphical Presentation

Shows the performance of long jump. Performance of Tripura athlete gradually increased till 2012, but it was huge fall in 2014. On the other hand performance of Bengal's athlete after huge fall in 2011, it was gradually increased. The difference between best performances of the states was 0.43 m. which was a big margin. But the latest performance difference between states was huge.

In the event Javelin throw Figure-8 shows that performance of after slightly increased in 2011, it was gradually deteriorated till 2014. on the other hand the performance of Bengal gradually increased till 2012, then huge improvement observed in 2013 and it was the best in that event. The difference between best performances of the states was 11.43m. Which was a big margin in javelin throw and latest difference even bigger.

Table VI: Shot put

Meet Year	2010	2011	2012	2013	2014
West Bengal	12.78 m.	12.67 m.	Not held	Not held	Not held
Tripura	7.57 m.	8.26 m.	9.63 m.	--	10.43 m.

**Result and Discussion**

From the above data it can be observed that in the entire running event the Bengal athletes were superior performer over the period. In case of field events also Tripura athletes were far behind except in high jump and javelin throw. Tripura discus throwers were going ahead of Bengal upto a certain period but some exceptional performance of Bengal athlete help Bengal to gone ahead.

Overall performances in track and field event West Bengal athletes were leading performer over the period among the two states. It may be the result of better infrastructure, better scope, availability of qualified coach, may be better talent identification system and geographical condition.

**Conclusion**

From the above discussion following conclusion may be drawn:

- In track event, athletes of West Bengal hold the better position among the all meets in comparison to Tripura.
- In jumping event athlete of West Bengal performed better than Tripura.
- In high jump event performance by athletes of Tripura was better in several times.
- In shot put and discus throw event Bengal athlete leads in term of performance among the meets in that period.
- In javelin throw event West Bengal and Tripura athletes are similar in performance.

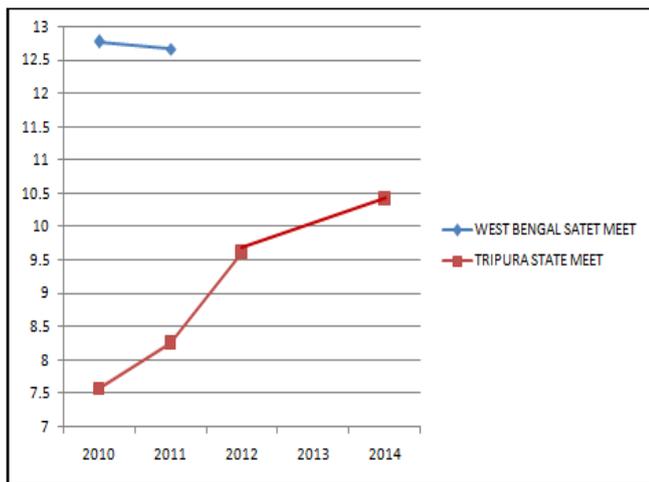


Fig 6: SHOT PUT Graphical Presentation

Shows that Bengals athlete better than Tripura's athlete. A gradually increased progress of performance of Tripura shot putters can be observed in that session. The difference between best performances of the states was 2.35m. That was a large margin too.

Table VII: Discus throw

Meet Year	2010	2011	2012	2013	2014
West Bengal	33.14 m.	32.60 m.	30.28 m.	Not held	31.12 m.
Tripura	24.07 m.	26.95 m.	25.28 m.	--	35.58 m.

Table No. VIII: Javelin throw

Meet Year	2010	2011	2012	2013	2014
West Bengal	25.25 m.	27.24 m.	29.62 m.	41.03 m.	Not held
Tripura	26.50 m.	29.60 m.	27.62m	--	27.06 m.

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