



Rhythm Ability among District, State and National level of Track and Field Athletes: - A Comparative study

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Abstract

The purpose of the study was to compare the selected Rhythm Ability of track and field athletes at different levels of achievement. It was hypothesized that there may be no significant difference in Rhythm Ability of track and field athletes at different levels of achievement. For the purpose of the study, 90 male track and field athletes from Gujarat were selected as a subject. Thirty athlete (n=30) from district level and thirty athlete (n=30) from state level participated as subjects for the study. Hence, purposive sampling technique was considered for selection of subjects. The age of the subjects was ranged from 15-18 years. Descriptive statistics was used to process the data prior to employing inferential statistics. Analysis of Variance (ANOVA) was used to compare Rhythm Ability of track and field players of different level on selected criterion variables separately. Level of significance was set at 0.05. It is evident from table-16 that significant difference were found between the Rhythmic Ability of District & State (0.0567), District & National (0.2017) and State & National level (0.1450). The observed sequence of performance of Rhythmic Ability in three groups is District>State>National. It may be concluded that Rhythmic Ability the national level players have better rhythmic ability due to their better neuromuscular coordination rhythmic sense and balance. The executions of skills are much better for these players than their lower level counterparts.

Key words: Rhythm Ability, National level athlete, State level athlete, District level athlete.

1. Introduction

Physical activity is an inherent trait of a human living. It develops its own in a natural way. It becomes all the way imperative to identify the nature and the degree of this natural talent and to nurture, modifies and refines it to get the cherished outcomes. The children perform a lot of activities such as running, jumping, throwing, catching, kicking and striking etc. The activities are known as natural or universal skills. The twenty first century is the most rapidly of changing century of all time. Rapidity of changes created unusual demands on individuals and on system of education. Today education must not only include the body and knowledge, but also to develop inquiring minds that will enable them to comprehend and accept what is to come tomorrow. As Jacks, the British philosopher, put it, living becomes an art only, when work and play, labor and leisure, mind and body, education and recreation are governed by single vision of excellence and a continuous passion for achieving it. The developing tendencies in international sports, especially in team games are identified as the increase in game tempo, tougher body game and greater variability in technique and tactics. An increased performance level can only be achieved by working and training of all major components i.e. technique, coordination, tactics, physical fitness, physiological qualities and psychological qualities. The theory of motor coordination is the basis for understanding the motor of coordination abilities. Motor coordination is part and parcel of actions regulation. Coordination abilities have also important and strong links with the motor skills as the motor coordination focus the basis of both. These abilities enable the sportsperson to do a group or set of movement with better quality and effect. Psychomotor abilities enable the sports man to do a group of movements with better quality and effect. The speed of learning of skill and its stability is directly dependent on the level of various coordinative abilities (Singh, 2013).

Coordinative abilities are primarily dependent on the motor control and regulation process of central nervous system. For each coordinative abilities the motor control and regulation process function in a definite pattern when a particular aspect of these functions is improved then the sports person is in a better position to do a certain group of movements which for their execution depends on the Central Nervous System function pattern (Singh, 1991).

2. Methodology

2.1 Objective of the study

The purpose of the study was to compare the selected Rhythm Ability of track and field athletes at different levels of achievement.

2.2 Hypothesis

It was hypothesized that there may be no significant difference in Rhythm Ability of track and field athletes at different levels of achievement.

2.3 Subjects

For the purpose of the study, 90 male track and field athletes from Gujarat were selected as a subject. Thirty athlete (n=30) from district level and thirty athlete (n=30) from state level participated as subjects for the study. Hence, purposive sampling technique was considered for selection of subjects. The age of the subjects was ranged from 15-18 years.

2.4 Administration of Straight and Rhythm Run Test

The objective of the test was administered to measure the 'Rhythm ability' of the subjects. The following equipments were arranged by the researcher before commencement of the final test, eleven gymnastics hoop- each one meters in diameter, one stop watch, and one measuring tape. The subject was run for a distance of thirty meter with maximum sprinting speed between two lines. The sprinting time of the subject was taken by the stopwatch. In the second attempt the subject was run at a particular rhythm with maximum speed through eleven hoops which was arranged systematically. Three hoops were kept in a sequence against each other at a distance of five meter away from the starting line. Similarly three hoops were kept at a distance of five meter from the finish line. Five more hoops were kept in a sequence in the middle of running distance. The subjects had to run through those hoops stepping in between the hoops. The scholar explained the test along with one demo and each subject was given one trail run.

2.5 Statistical Analysis

Descriptive statistics was used to process the data prior to employing inferential statistics. Analysis of Variance (ANOVA) was used to compare Rhythm Ability of track and field players of different level on selected criterion variables separately. Level of significance was set at 0.05.

3. Result

The descriptive measure in terms significant difference of to compare Rhythm Ability of track and field players of different level are shown in Table 1 & Table 2.

Table 1
Comparison of Rhythmic Ability among District, State and National level of Track and Field Players (n=90)

Levels	Mean (Sec.)	S.D.	Analysis of Variance					
			Sum of Squares	Df	Mean Square	F	Sig.	
District (n=30)	5.6817	0.20906	Between Groups	0.649	2	0.325	5.483	0.006
State (n=30)	5.6250	0.24801						
National (n=30)	5.4800	0.26897						
Total(N=90)	5.5956	0.25524	Within Groups	5.149	87	0.059		
			Total	5.798	89			

Since significant differences was found among the District, State and National level players in related to Rhythmic Ability, LSD post hoc test was applied to compare Paried Means.

Table 2
LSD test for mean Comparison on Rhythmic Ability among District, State and National level of Track and Field Players

(I) levels	(J) levels	Mean Difference (I-J)	Sig.
	State	0.0567	0.369
District	National	0.2017*	0.002
State	National	0.1450*	0.023

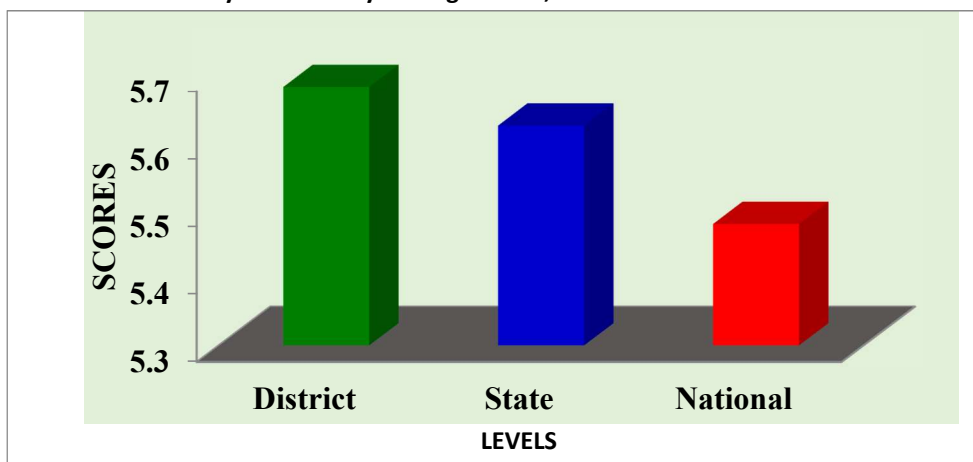
* The mean difference is significant at the 0.05 level.

It is evident from table-2 that significant difference was found between the Rhythmic Ability of District & State (0.0567), District & National (0.2017) and State & National level (0.1450).

The observed sequence of performance of Rhythmic Ability in three groups is District>State> National. It may be concluded that Rhythmic Ability the national level players have better rhythmic ability due to their better neuromuscular coordination rhythmic sense and balance. The executions of skills are much better for these players than their lower level counterparts.

Fig-1

Comparison of Mean Scores Rhythmic Ability among District, State and National Level of Track and Field Players



4. Discussions

There was a statistically significant difference between groups as determined by one-way ANOVA {F (2, 87) =5.483, p =0.006}. A LSD post-hoc test revealed that the time to complete the rhythmic ability was statistically significant better in National players (5.4800 ± 0.1450 p= 0.002) There were no statistically significant difference between the district and state level (p= 0.364).

5. Conclusions

The Causative factors for statistical significance on rhythmic ability could be attributed to the fact that as. It is the ability of sportsmen to respond quickly to a given stimulus and execute well directed actions following a signal. The national level players have better rhythmic ability due to their better neuromuscular coordination rhythmic sense and balance. The executions of skills are much better for these players than their lower level counterparts.

6. References

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