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A comparative study of speed and agility variables of athletics and football players

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Abstract

The purpose of the study was to compare motor ability variables between Athletics and Football players. To achieve the purpose, 36 male players (18 football players and 18 athletics players) were selected from Shah Satnam Ji Boys College. The age of selected players ranged between 18 to 26 years. All the subjects were divided into two groups e.g. group X and group Y (High performance group and low performance group). Group X comprised 18 Jr. National/Sr. National/ Inter University players (9 players from Athletics and 9 players from Football). Group Y comprised 18 State / District / Inter College level players. To measure the selected motor ability Variables (speed and agility), Barrow motor ability test (60 yard dash for speed and zig-zag run for agility) were used. Independent t test was used for statistical analysis. Researcher observed significant difference between athletics and football players.

Keywords: Speed and agility variables, athletics, football player and Shah Satnam Ji Boys College

Introduction

Motor ability is the ability to perform different motor skills determined by general motor ability. New methods and skills are introduced in every field for better development. The field of physical education and Sports is also not exception. To meet the competitive demands of Sports, different methods have been invented by Physical Educationists and Sports persons. General motor ability has been most important aspect for research of Physical Educationists because it is directly related with Physical Fitness and performance in Sports. Barrow motor ability test was developed by H.M. Barrow to test the motor ability of college men. Initially 29 test items were developed by him, later on these test items were converted in two test batteries. Agility and Speed, both are important motor ability components for Sports. Agility is the controlled ability to change body positions and direction rapidly and accurately. High level of coordination is required for Agility. Barrow and McGee (1971) [2], defined speed as, one's ability to perform successive movement of same pattern at a fast rate. Mazumdar (2001) [4], compared physiological variables and motor ability of rural and urban students of Tripura. Total 100 players, 50 from rural background and 50 from urban area were selected. Results of the study didn't show any significant difference in motor ability level of rural and urban players.

The present study focused on the two components of motor ability e.g. speed and Agility of Athletics and Football players to investigate the differences between motor ability variables.

Methodology

Total 36 male players were selected to achieve the purpose to compare motor ability variables/speed and agility between athletics and football players. The age of all subjects was 18 to 26 years. All the subjects were selected from Shah Satnam Ji Boys College. All the 36 subjects were divided into two groups namely X and y groups. X group comprised high performance (Jr. National/Sr. National/Inter University) level players and Y group compromised low performance level players of state/inter-college/district level. Both the groups consists 9 athletics players and 9 football players. Motor ability variables (speed and agility) were tested using Barrow motor ability test items (60 yards dash for speed and zig-zag run for agility). Independent t test was used to statistically compare the scores of both groups and hence results were drawn.

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Results and Discussion

Table 1.1: Comparison of Speed Variable of Athletics and Football players

	Game	N	Mean	SD	Df	t
Group x- 60 yard Dash	Athletics	9	7.07	0.07	16	-2.56
	Football	9	7.33	0.08		
Group y- 60 yard Dash	Athletics	9	7.21	0.06	16	-2.79
	Football	9	7.46	0.07		

*significance level = 0.05, Critical/Table value = 2.12 (df=16)

Table 1.1 indicates that the mean scores of 60 yard dash (Group-X) of Athletics and Football players were 7.07 and 7.33 respectively. SD was 0.07 and 0.08 respectively. Calculated t value was -2.56 which was found larger than Critical value at df = 16 at 0.05 level of significance. Hence, significant difference exists between Athletics and Football players. It means that Jr./Sr. National/inter-university Athletics players were found better in 60 yard dash performance than Jr./Sr. National/inter-university Football players.

The mean scores of 60 yard dash (Group-y) of Athletics and Football players were 7.21 and 7.46 respectively. SD was 0.06 and 0.07 respectively. Calculated t value was -2.79 which was found larger than Critical value at df = 16 at 0.05 level of significance. Hence, significant difference exists between Athletics and Football players. It means that state/inter-college/ district Athletic players were found better in 60 yard dash performance than state/ inter-college/ district Football players.

Table 1.2: Comparison of Agility Variable of Athletics and Football players

	Game	N	Mean	SD	Df	t
Group X- Zig-Zag Run	Athletics	9	22.60	0.24	16	-
	Football	9	21.74	0.31		
Group Y- Zig-Zag Run	Athletics	9	22.84	0.21	16	-
	Football	9	22.18	0.23		

*significance level = 0.05

Critical/Table value = 2.12 (df=16)

Table 1.2 indicates that the mean scores of Zig-Zag Run (Group-X) of Athletics and Football players were 22.60 and 21.74 respectively. SD was 0.24 and 0.31 respectively. Calculated t value was -2.37 which was found larger than Critical value at df = 16 at 0.05 level of significance. Hence, significant difference exists between Athletics and Football players. It means that Jr./Sr. National/inter-university Football players were found better in Zig-Zag Run performance than Jr./Sr. National/inter-university Athletics players.

The mean scores of Zig-Zag Run (Group-y) of Athletics and Football players were 22.84 and 22.18 respectively. SD was 0.21 and 0.23 respectively. Calculated t value was -2.14 which was found larger than Critical value at df = 16 at 0.05 level of significance. Hence, significant difference exists between Athletics and Football players. It means that state/inter-college/ district Football players were found better in 60 yard dash performance than state/ inter-college/ district Athletics players.

It was hypothesized that there will be no significant difference between performance level of Athletics and Football players in 60 yard dash and zig-zag run of both x and y groups. But results of the study shows that significant difference exists between mean scores of both groups. Hence, null hypothesis was rejected.

Conclusion

Significant difference exists between both the criterion variables (Speed and Agility) of both groups. So, on the basis of the results following conclusion may be drawn:-

- Athletics players of both groups were found superior than Football players of both groups in speed ability/60 yard dash (it may be due to genetic make-up or type of training schedule provided to players).
- Football players of both groups were found superior than Football players of both groups in Agility/ zig-zag run (Type of training schedule provided to players/ nature of sports).

So, findings of the study provide solid base for selectors and coaches in choosing talent for particular game according to their Speed and Agility level.

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