STAR Research Journal

Available online at www.starresearchjournal.com (Star International Journal)
PHYSICAL EDUCATION
Star. Phy. Edn 10 (2014)

COMPARISON OF SELECTED PHYSICAL FITNESS VARIABLES BETWEEN MEDIUM FAST BOWLERS AND SPIN BOWLERS IN CRICKET

C.Winstrong* & P.Gopinathan**

Ph. D. Research scholar, TNPESU, Chennai.
Assistant Professor, TNPESU, Chennai.

Abstract

The purpose of the study was to compare the selected physical fitness variables between medium fast and spin bowlers in cricket. For the purpose of the study, fifteen medium fat bowlers and fifteen spin bowlers were selected at random from Chennai I division league teams. Their age ranged between 18 and 28 years. The bowlers were measured in the selected physical fitness variables namely, speed, arm explosive power, flexibility, and leg strength. The collected data were analysed by independent t test. The results of the study revealed that the medium fast bowlers were better in the selected physical fitness variables namely, speed, arm explosive power, and leg strength. There was no significant difference between medium fast bowlers and spin bowlers on flexibility.

Key words: *Cricket, medium fast bowlers and Spin bowlers*

Introduction

Cricket is a high-profile world sport. Cricket has had a history of being regarded as a leisurely, gentleman's game (Clark, 1996). Today, with a solid ball weighing approximately 156 grams propelled from a distance of 20m at a speed of about 140 km/h to an awaiting batter, it can hardly be called a gentlemanly game (Stockhill & Bartlett, 1993; Corrigan, 1984). The bowlers are named as medium fast bowlers when their speed of delivery of bowling is between 120km/h and 129 km/h.

The medium pace bowlers are in need of good run speed, good shoulder strength, leg strength and flexibility. The influence the above said components help a bowler to deliver the ball with good speed (Hughes & Simon, 2002). The fast bowling actions are front on, side on and mixed on.

Spin bowlers or spinners impart rotation to the ball to get a batsman out. The spin on the ball makes its movement hard to predict, particularly when it bounces, hence spin bowlers try to deceive batsmen into making a mistake. Speed is not crucial in spin bowling, and spinners tend to bowl in the slow-medium to medium-slow range, around 70 to 90 km/h. There are two broad categories of spin bowling namely, wrist spin and finger spin. The phases of bowling consist of approach run, back foot contact, delivery stride, front foot contact, ball release and follow through.

Method

The purpose of the study was to compare the selected physical fitness

variables between medium fast and spin bowlers in cricket. For the purpose of the study, fifteen medium fat bowlers and fifteen spin bowlers were selected at random from Chennai I division league teams. The medium fast bowlers were bowling at the speed range between 120km/h and 129 km/h. The medium fast bowlers were not considered with respect to front on, side on and mixed on. The spin bowlers were not considered with regard to off break and leg break action. Their age ranged between 18 and 28 years. It was hypothesized that there would be a significant difference on the selected physical fitness variables between medium fast.

The research design of the study was static group comparison design. The bowlers of both the groups were measured in the selected physical fitness variables namely, speed, arm explosive power, flexibility, and leg strength. The bowlers' speed was assessed by 50m test, arm explosive power was measured by medicine ball throw (2.7 kg), flexibility was assessed by sit and reach test and leg strength was measured by standing long jump. The collected data were analysed with independent t test. The level of significance was fixed at 0.05 level. The results were analysed with the two tailed test.

Results

Table –I showing the results of speed between medium fast and spin bowlers

Group	Mean	MD	SD±	Obtained t value
Fast medium Bowlers	6.77	0.49	0.21	5.08*
Spin bowlers	7.27		0.31	

*Significant
Table value @ 0.05 level with df 13, 2.160

Table-I shows the mean (6.77, 7.27), mean difference (0.49), standard deviation (0.21, 0.31), and the obtained t value (5.08) on speed between medium fast bowlers and spin bowlers. The obtained t value 5.08 was higher than the table t value 2.160 at 0.05 level of significance. Hence, there was a significant difference between medium fast bowlers and spin bowlers on speed.

Table –II showing the results of arm power between medium fast and spin bowlers

Group	Mean	MD	SD±	Obtained t value
Fast medium Bowlers	7.52	1.22	0.65	5.05*
Spin bowlers	6.30		0.67	

*Significant
Table value @ 0.05 level with df 13, 2.160

Table-II shows the mean (7.52, 6.30), mean difference (1.22), standard deviation (0.65, 0.67), and the obtained t value (5.05) on arm power between medium fast bowlers and spin bowlers. The obtained t value 5.05 was higher than the table t value 2.160 at 0.05 level of significance. Hence, there was a significant difference between medium fast bowlers and spin bowlers on arm power.

Table –III showing the results of flexibility between medium fast and spin bowlers

Group	Mean	MD	SD±	Obtained t value
Fast medium Bowlers	24.73	0.40	2.34	0.48
Spin bowlers	25.13		2.23	

*Significant
Table value @ 0.05 level with df 13, 2.160

Table-III shows the mean (24.73, 25.13), mean difference (0.40), standard deviation (2.34, 2.23), and the obtained t value (0.48) on flexibility between medium fast bowlers and spin bowlers. The obtained t value 0.48 was lesser than the table t value 2.160 at 0.05 level of significance. Hence, there was no significant difference between medium fast bowlers and spin bowlers on flexibility.

Table –IV showing the results of leg strength between medium fast and spin bowlers

Group	Mean	MD	SD±	Obtained t value
Fast medium Bowlers	2.37	0.11	0.03	9.58*
Spin bowlers	2.26		0.03	

*Significant
Table value @ 0.05 level with df 13, 2.160

Table-IV shows the mean (2.37, 2.26), mean difference (0.11), standard deviation (0.03, 0.03), and the obtained t value (9.58) on leg strength between medium fast bowlers and spin bowlers. The obtained t value 9.58 was higher than the table t value 2.160 at 0.05 level of significance. Hence, there was a significant difference between medium fast bowlers and spin bowlers on leg strength.

The results of the study revealed that the medium fast bowlers were better in the selected physical fitness variables namely, speed, arm explosive power, and leg strength. There was no significant difference between medium fast bowlers and spin bowlers on flexibility.

Discussion

The medium fast bowlers are better than spin bowlers in speed, arm power, and leg strength. The medium fast bowlers are in need of tremendous speed which helps them to release the ball with maximum speed. The approach run by the pace bowlers is at maximum speed to increase the release velocity. The arm explosive power helps pace bowlers to generate more force to deliver the ball at highest possible velocity. The leg strength also helps a pace bowler to increase the momentum and generate force through kinetic chain movement.

The spinners are in need of more accuracy rather than speed, arm power and leg strength. The pace and spin bowlers are equal at flexibility. The spin bowlers are in need of more coordination and accuracy at the time of delivery.

There was no significant difference between medium fast bowlers and spin bowlers on flexibility.

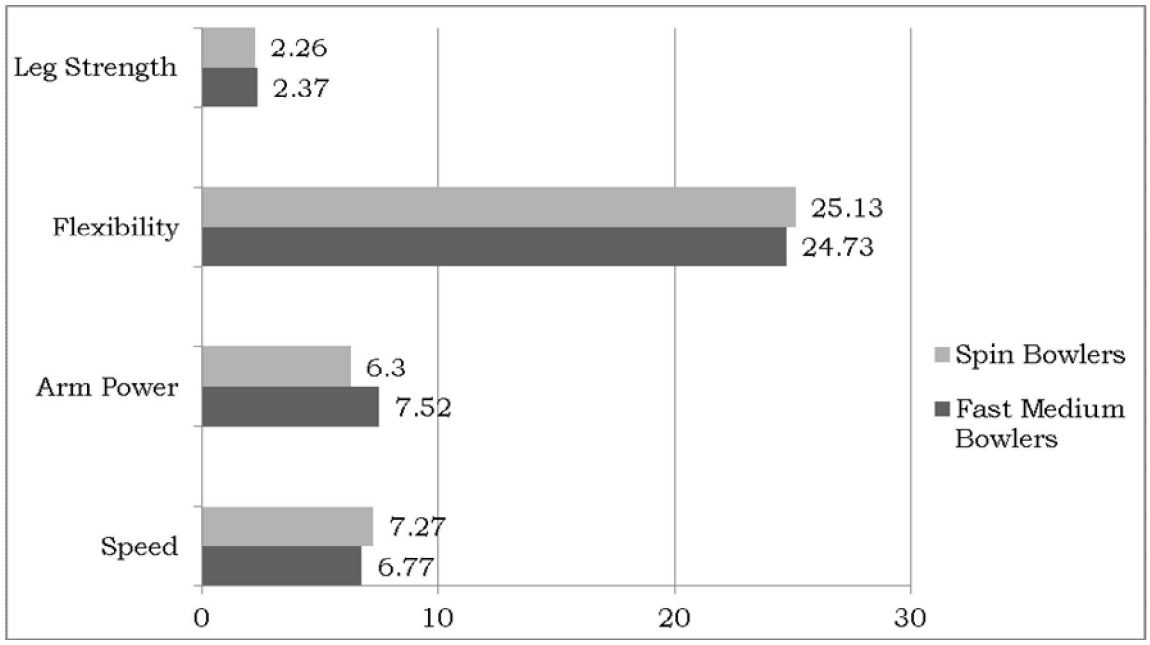

Figure-1 showing the mean scores of selected variables between medium fast bowlers and spin bowlers

Conclusion

The medium fast bowlers are better than spin bowlers in speed, arm power, and leg strength. There was no significant difference between medium fast bowlers and spin bowlers on flexibility.

References:

Clark M. Body armour for the body line. The Australian Standards 1996 (February): 22-23.

Corrigan AB. Cricket injuries. Australian Family Physician 1984;13 (8):558-562.

Stockhill, Bartlett. A temporal and kinematic comparison of junior and senior international cricket bowlers. ISB 1993:1290-1291.

Hughes,Simon (2002), Jargonbusting: The Analyst's Guide to Test Cricket, Channel 4 books, ISBN 0-7522-6508-3.