

Effect of Different Velocity of Ball on Speed of Movement of Male Cricket Batsmen

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Abstract

Objective: The objective of the study was to investigate the effect of different velocity of ball on speed of movement of male cricket batsmen.

Methodology: - A total of 30 male cricket players were selected from cricket match practice of LNUPE and M.P. state cricket academy. Age of the subjects was ranging between 16 to 25 years. All the subjects divided in three groups A, B & C, each consisting of 10 subjects. A & B group were considered as experimental group where group C was considered as control group. Again experimental groups divided into two groups A is given batting training at the 65 mph ball velocity and B is given batting training at 75 mph ball velocity and another is C group which is served as a control group and continued participating in the normal program. The data was collected for each variable by administrating their respective tests. The test was administrated at the physiology laboratory of LNUPE, Gwalior, M.P. The data were collected before the starting of experimental treatment (pre-test) and the end of training period (post-test). To investigate the effect of different velocity of ball on speed of movement of Cricket Batsmen, ANCOVA was used. The level of significance was at 0.05.

Findings: - In relation to speed of movement of 65 mile per hour group (A), 75 mile per hour group (B) and control group indicate insignificant F-ratio of .281, .881 and 1.031 for the pre test, post test and adjusted mean respectively because F-ratio value is lesser than required F value of (2, 27) -3.35 and (2, 26) -3.37 at 0.05 level of significance.

Research Limitations and Implications: - The study will help to evaluate the effect of bowling machine on speed of movement.

Keywords: Velocity of Ball, Speed of movement

Paper type: - Research Paper (Experimental Research)

INTRODUCTION

Out of all physical fitness components that constitutes one's general athletic or general motor ability reaction time and respond time or speed of movement may dominate one's ability to perform in various situations demanding quick responses. In physical education we cannot be concerned primarily with the individual reaction time but with his quick and accurate responses to situation in sports. We need not to know not only how quickly he can react by pressing a key but also with what speed and accuracy he reacts in batting coming with tremendous speed with quick and correct timing in cricket.

Reaction time and speed of movement dominate one's batting ability in cricket. Especially the opening batsmen and number three, four and five need very good reaction time and speed of movement to face fast bowling. Now a days so many body protectors like chest guard, thigh guard, elbow guard and helmet are produced by various sports goods makers but even though these are not enough to avoid injuries from fast bowling. Reaction time and speed of

movement are not important only to avoids hits by fast bowling but also to efficiently achieve best performance (Nelson k., 1974)

Objective of the Study

The objective of the study was to investigate the effect of different velocity of ball on speed of movement of male cricket batsmen.

METHODOLOGY

A total of 30 male cricket players were selected from cricket match practice of LNUPE and M.P. state cricket academy. Age of the subjects was ranging between 16 to 25 years. All the subjects divided in three groups A, B & C, each consisting of 10 subjects. A & B group were considered as experimental group where group C was considered as control group. Again experimental groups divided into two groups A is given batting training at the 65 mph ball velocity and B is given batting training at 75 mph ball velocity and another is C group which is served as a control group and continued participating in the normal program. The data was collected for each variable by administrating their respective tests. The test was administrated at the physiology laboratory of LNUPE, Gwalior, M.P. The data were collected before the starting of experimental treatment (pre-test) and the end of training period (post-test). To investigate the effect of different velocity of ball on speed of movement of Cricket Batsmen, ANCOVA was used. The level of significance was at 0.05.

Experimental Design: Pre test-post test Randomized groups design was used for the study. In the pre test post test randomized groups design, the groups are randomly formed, but all groups are given a pre test as well as post test:-

R_A	O₁	T	O₂
R_B	O₃	T	O₄
R_C	O₅		O₆

Further the experimental treatments also were assigned at random to experimental groups (A and B) and the third group C served as the control group. The experimental groups participated in two training programmes i.e. A was given batting training at the 65 mph ball velocity and B was given batting training at 75 mph ball velocity and another group C which is served as a Control group the treatment given was for a total duration of six weeks.

FINDINGS

Table-1 Analysis of Covariance of the Means of Two Experimental Groups and the Control Group in Reaction Time

Mean	Groups			Sum of square	df	(mss) means sum of square	f-ratio	
	65 mile/hour A	75 mile/hour B	Control group					
Pre test mean	.2760	.2665	.3030	A	.007	2	.004	2.782
				W	.035	27	.001	
Post test mean	.2840	.2750	.2900	A	.001	2	.001	.320
				W	.048	27	.002	
Adjusted	.288	.274	.274	A	.001	2	.001	.528

mean				W	.027	27	.001	
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Significant at .05 level of confidence the table value of 'F' (2, 27)-3.35 and (2, 26) -3.37.

Table -2 of Analysis of Co Variance for speed of movement of 65 mile per hour group (A), 75 mile per hour group (B) and control group indicate insignificant F-ratio of 2.782, .320 and .528 for the pre test, post test and adjusted mean respectively because F- ratio value is lesser than required F value of (2, 27)-3.35 and (2, 26) -3.37 at 0.05 level of significance

Conclusions

In relation to speed of movement of 65 mile per hour group (A), 75 mile per hour group (B) and control group indicate insignificant F-ratio of 2.782, .320 and .528 for the pre test, post test and adjusted mean respectively because F- ratio value is lesser than required F value of (2, 27) -3.35 and (2, 26) -3.37 at 0.05 level of significance.

Discussions

From the statistical analysis of the data obtained, it is evident that there was insignificant difference of different velocity of ball on speed of movement of cricket batsmen. This was perhaps due to insufficient training. In other word we can say that 6 week training was not enough to improve the speed of movement and we can also say that perhaps that speed of 65 mile per hour and 75 mile per hour bowling training was not sufficient to improve batsman's speed of movement .

Some other factors like Interest and motivation of the trainee might have affected the results because the training was conducted after inter university matches.

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