



Effect Of Plyometric Training Combined With Game Specific Training On Selected Skill Performance Variables Among Men Cricket Players

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ABSTRACT

The purpose of the study was to find out the effect of plyometric training combined with game specific training on skill performance variables among men cricket players. To achieve the purpose of the present study, forty-five cricket players from Gobi Arts and Science College, Gobichettipalayam, Erode were selected as subjects at random and their ages ranged from 18 to 25 years. The subjects were divided into three equal groups of fifteen subjects each. Group I acted as Experimental Group I (plyometric Training), Group II acted as Experimental Group II (plyometric Training combined with Game Specific Training) and Group III acted as Control Group. The requirement of the experiment procedures, testing as well as exercise schedule was explained to the subjects so as to get full co-operation of the effort required on their part and prior to the administration of the study. It was observed that the twelve weeks of plyometric training with Game Specific Training have significantly improved the selected Game Specific Training than the plyometric training and control group.

KEYWORDS: Plyometric Training, Game Specific Training, Cricket.

INTRODUCTION

Cricket performance depends on a combination of technical skill, tactical awareness, and physical capacities such as speed, power, agility, and endurance. Among these, explosive lower-limb power and rapid neuromuscular coordination are critical for actions like fast bowling run-up and delivery, powerful batting shots, quick singles and twos, sprinting between the wickets, and agile fielding and catching. Plyometric training, characterized by rapid stretch-shortening cycle exercises (e.g., hops, bounds, depth jumps), has been widely used to improve muscular power, reactive strength, and sprint performance in many sports. Meanwhile, game-specific training

integrates technical and tactical drills that replicate the perceptual and motor demands of match situations, promoting skill transfer and decision-making under pressure.

Despite abundant research on general strength and conditioning interventions in team and field sports, limited studies have specifically examined the combined effect of plyometric programs with game-specific cricket training on skill performance variables in male cricketers. Isolated plyometric interventions often demonstrate improvements in explosive physical qualities, but transfer to cricket-specific skills (batting timing, bowling velocity and accuracy, sprinting between wickets, fielding throws and catches) is not guaranteed without contextualized practice. Conversely, skill training alone may improve technique and situational responses but may be constrained by inadequate physical power or reactive ability.

This study investigates the effect of a combined plyometric and game-specific training program on selected skill performance variables among men's cricket players. By integrating high-velocity neuromuscular conditioning with cricket-specific drills, the intervention aims to enhance both the physical substrates of explosive actions and the perceptual-motor coordination required in match contexts. The primary objectives are: (1) to evaluate changes in cricket-specific skill measures—batting power and timing, bowling speed and accuracy, sprint speed between wickets, and fielding performance—and (2) to compare these changes with those achieved through conventional training methods.

Understanding the combined training effect has practical importance for coaches and strength-conditioning professionals seeking efficient, sport-specific programs that optimize on-field performance. If synergistic benefits are demonstrated, the evidence would support incorporating structured plyometric protocols alongside targeted game drills into routine training for male cricketers to improve match-relevant skills and competitive outcomes.

PLYOMETRIC TRAINING

Plyometric training uses rapid stretch–shortening cycle movements to develop explosive power, reactive strength, and rapid force production; when applied to cricketers it can improve sprint acceleration between wickets, bat speed and shot power, bowling run-up explosiveness and ball velocity, and reactive fielding abilities. Effective programming emphasizes quality over quantity—short, high-intensity sets with full recovery, 1–3 sessions/week, progressive overload from bilateral to unilateral and horizontal to vertical movements, and appropriate volume for the athlete's level—while ensuring an adequate strength base, sound landing mechanics, surface selection, and recovery to minimize injury risk and enhance transfer to game-specific skills.

GAME-SPECIFIC TRAINING

Game-specific training focuses on developing physical, technical, and mental skills that directly translate to performance in a particular sport or game. Instead of general fitness, it emphasizes movements, strategies, and conditions athletes actually encounter during play—such as agility drills for quick direction changes, sport-specific strength exercises, and situational practice like match simulations. This approach helps improve efficiency, reaction time, coordination, and decision-making under pressure, ensuring that training adaptations are highly relevant and transferable to real competition.

Purpose of the Study

The present research study aimed to examine the changes in skill performance variables and the improvements resulting from specific training among cricketers. It is intended to help cricket players enhance their overall performance. The findings of this study will benefit physical education teachers and cricket coaches by enabling them to design more effective training schedules for cricket players. Furthermore, this research will contribute to the existing body of knowledge in the field of cricket.

METHODOLOGY

The purpose of the study was to find out effect of plyometric training combined with game specific training on skill performance variables among men cricket players. To achieve the purpose of the present study, forty-five cricket players from Gobi Arts and Science College, Gobichettipalayam, Erode were selected as subjects at random and their ages ranged from 18 to 25 years. The subjects were divided into three equal groups of fifteen subjects each. Group I acted as Experimental Group I (plyometric Training), Group II acted as Experimental Group II (plyometric Training combined with Game Specific Training) and Group III acted as Control Group. The requirement of the experiment procedures, testing as well as exercise schedule was explained to the subjects so as to get full co-operation of the effort required on their part and prior to the administration of the study.

STATISTICAL TECHNIQUES

Analysis of covariance (ANCOVA) was computed where the final means were adjusted for differences in the initial means, and the adjusted means were tested for significance. Whenever the adjusted post-test means were found significant, the Scheffe's post-hoc test was administer to find out the paired means difference. To test the obtained results on variables, level of significance 0.05 was chosen and considered as sufficient for the study.

TABLE – I

COMPUTATION OF MEAN AND ANALYSIS OF COVARIANCE ON BATTING ACCURACY OF PLYOMETRIC TRAINING, PLYOMETRIC TRAINING COMBINED WITH GAME SPECIFIC TRAINING AND CONTROL GROUPS

Test	PTG	PTWGSTG	Control Group	Source of Variance	Sum of Squares	df	Mean Square	F
Pre Test Mean	32.60	32.55	32.58	BG	0.004	2	0.002	0.41
				WG	0.20	42	0.005	
Post Test Mean	34.20	36.00	32.80	BG	1.62	2	0.81	16.20*
				WG	2.10	42	0.050	
Adjusted Post Test Mean	34.10	36.10	32.75	BG	1.58	2	0.79	15.80*
				WG	2.05	41	0.050	

* Significant at 0.05 level

The above table indicates the adjusted mean value of batting accuracy of plyometric Training, plyometric Training combined with Game Specific Training and control groups were 34.10, 36.10 and 32.75 respectively. The obtained F-ratio of 15.80 for adjusted mean was greater than the table value 3.22 for the degrees of freedom 2 and 41 required for significance at 0.05 level of confidence.

FIGURE – I

SHOWS THE MEAN VALUES ON BATTING ACCURACY OF PLYOMETRIC TRAINING, PLYOMETRIC TRAINING COMBINED WITH GAME SPECIFIC TRAINING AND CONTROL GROUPS

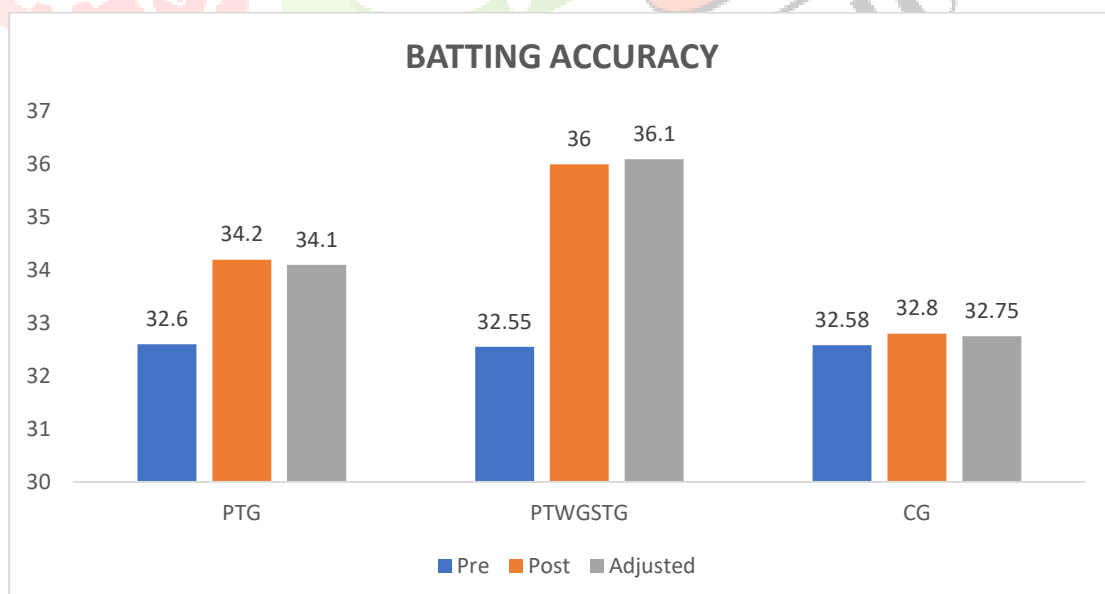


TABLE – II

COMPUTATION OF MEAN AND ANALYSIS OF COVARIANCE ON BOWLING ACCURACY OF PLYOMETRIC TRAINING, PLYOMETRIC TRAINING COMBINED WITH GAME SPECIFIC TRAINING AND CONTROL GROUPS

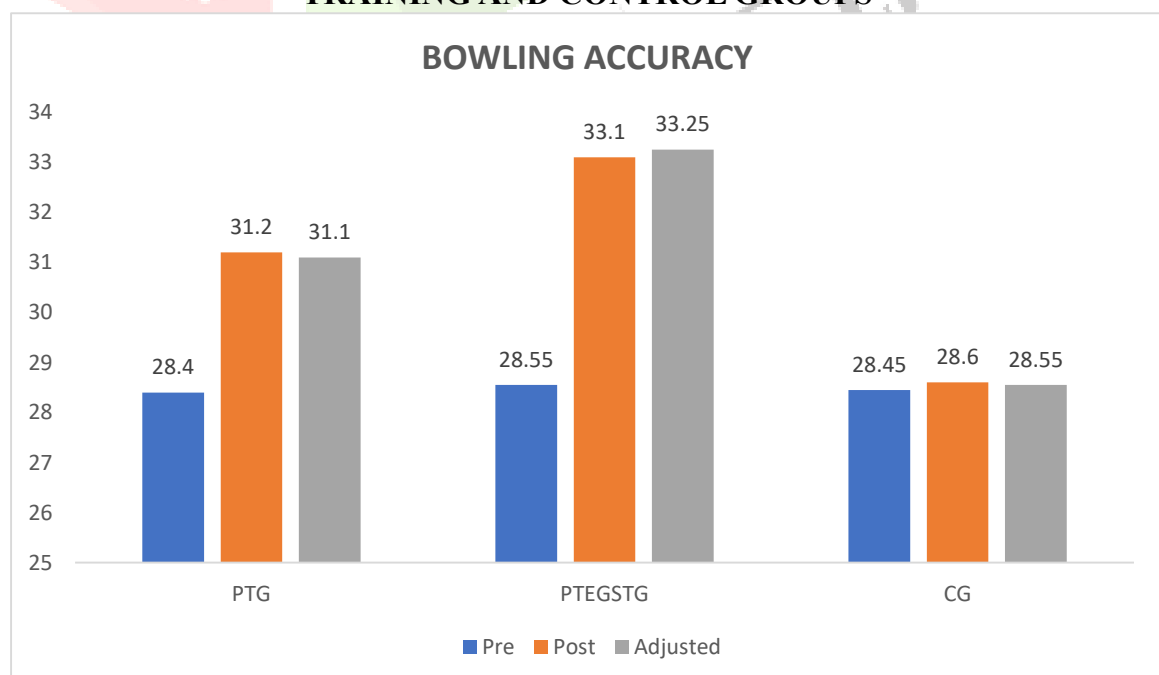
Test	PTG	PTWGSTG	Control Group	Source of Variance	Sum of Squares	df	Mean Square	F
Pre Test Mean	28.40	28.55	28.45	BG	0.006	2	0.003	0.38
				WG	0.22	42	0.005	
Post Test Mean	31.20	33.10	28.60	BG	1.75	2	0.875	17.50
				WG	2.10	42	0.050	
Adjusted Post Test Mean	31.10	33.25	28.55	BG	1.70	2	0.85	17.00
				WG	2.05	41	0.050	

* Significant at 0.05 level

The above table indicates the adjusted mean value of bowling accuracy of experimental plyometric Training, plyometric Training combined with Game Specific Training and control groups were 31.10, 33.25 and 28.55 respectively. The obtained F-ratio of 17.00 for adjusted mean was greater than the table value 3.22 for the degrees of freedom 2 and 41 required for significance at 0.05 level of confidence.

FIGURE – II

SHOWS THE MEAN VALUES ON BOWLING ACCURACY OF PLYOMETRIC TRAINING, PLYOMETRIC TRAINING COMBINED WITH GAME SPECIFIC TRAINING AND CONTROL GROUPS



CONCLUSION

From the results obtained, the following conclusions were drawn:

1. It was observed that the twelve weeks of plyometric Training have significantly improved the selected skill performance variables than the control group.
2. It was observed that the twelve weeks of plyometric Training combined with Game Specific Training have significantly improved the selected skill performance variables than the plyometric Training and control group.

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