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International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

The Role of SAQ Training and Sand Training in Selected Motor Fitness Variables among Male Cricket Players

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ABSTRACT

Objective: The present study was to examine the effects of SAQ training and sand training on certain motor fitness variables in male cricket players. Methodology: Sixty male participants (N=60) were selected at random from inter-collegiate tournaments at Bharathiar University, Coimbatore, Tamil Nadu. The ages of the participants ranged between 18 to 25 years. The participants who were selected were divided into the SAQ Training Group (SAQTG), Sand Training Group (STG), and a Control Group (CG), with twenty participants (N=20) in each group. The SAQ training group (SAQTG) underwent SAQ training, the Sand training group (STG) went through sand training, whereas the Control Group went through regular activities traditional training. Speed was assessed using a 50-meter dash, agility was assessed using a shuttle run test, and leg explosive power was assessed using a vertical leap test. The training phase continued for eight weeks, five days a week. The training lasted roughly 40 to 50 minutes each day. Using analysis of covariance, the data gathered from the three groups both before and after the training period was statistically examined for significant improvement. whenever a significant 'F' ratio was identified. The 0.05 level was used as the significance level for the purpose evaluate the results' significance.

Results: When compared to the control group, the present investigation's results show that SAQ and sand training improve motor fitness variables, including speed, agility, and leg explosive power.

Conclusion: Comparing the SAQ and sand training groups to the control group, the study found that both significantly enhance motor fitness variables, namely speed, agility, and leg explosive power. This improvement demonstrates how well these training methods work to improve important motor abilities.

Introduction

Enhancing physical fitness is crucial for cricket players to perform at their highest level. Sand training and SAQ (Speed, Agility, and Quickness) training are two popular and effective training methods. For cricket players who need quick reflexes, quick movements, and general athletic ability, each of these methods of training emphasizes a various component of motor fitness.

SAQ Training

Through an assortment of dynamic exercises, SAQ (Speed, Agility and Quickness) training aims at improving an athlete's speed, agility and quickness. The goal of this type of training is to enhance neuromuscular coordination so that players can move efficiently and precisely on the field (Lockie *et al*., 2014). SAQ training is particularly beneficial for cricket players as it improves their ability to run between wickets, field quickly and change direction swiftly (Rössler *et al*., 2016). SAQ training frequently includes drills such as ladder drills, cone drills and plyometric exercises, which aid in the development of explosive strength and reaction skills (Miller *et al*., 2006).

Sand Training

However, athletes may perform workouts on sand surfaces in sand training, resulting in a unique and demanding setting. Sand's resistance and instability make the body work harder, using more muscles and enhancing general strength, balance and coordination (Binnie *et al*., 2013). Sand training can help cricket players enhance their lower body strength and endurance, which are essential for playing for extended periods of time and continuing to perform well when fatigued (Impellizzeri *et al*., 2008). Furthermore, because sand training has less of an impact on joints, it is a safer choice for intense workouts, minimizing the chance of injury (Gaudino *et al*., 2012).

Sand training and SAQ both have particular advantages that increase cricket's physical demands. Cricket players can increase their level of motor fitness and perform better on the field by using these training tactics (Rogers *et al*., 2015).

Methodology

Sixty (N=60) male subjects were selected at random from intercollegiate tournaments held at Bharathiar University in Coimbatore, Tamil Nadu. Participants were between the ages of 18 and 25. The chosen participants were split up into three groups: the Sand Training Group (STG), the SAQ Training Group (SAQTG), and a Control Group (CG). Each group had twenty participants (N=20). The Control Group underwent no training in any way and went through routine daily tasks, while the SAQ training group (SAQTG) received SAQ training and the Sand training group (STG) received sand training. The 50-meter dash was used to assess speed, the shuttle run test was used to measure agility, and the vertical jump test was used to measure leg explosive power. The training phases went for eight weeks with five days a week. The training lasted approximately forty to fifty minutes every day. Using analysis of covariance, the data collected from the three groups both before and after the training period was statistically analyzed for significant improvement. whenever it was found that the 'F' ratio was significant. The significance level of 0.05 was selected for each case.

Table - 1

Selected Variables and Their Standard Test Items

S. No	Variables	Test	Unit of measurement
1	Speed	50-meter dash	In Seconds
2	Agility	Reaction Time and Agility Test	In Seconds
3	Leg explosive power	vertical jump test	In cm

Table – 2

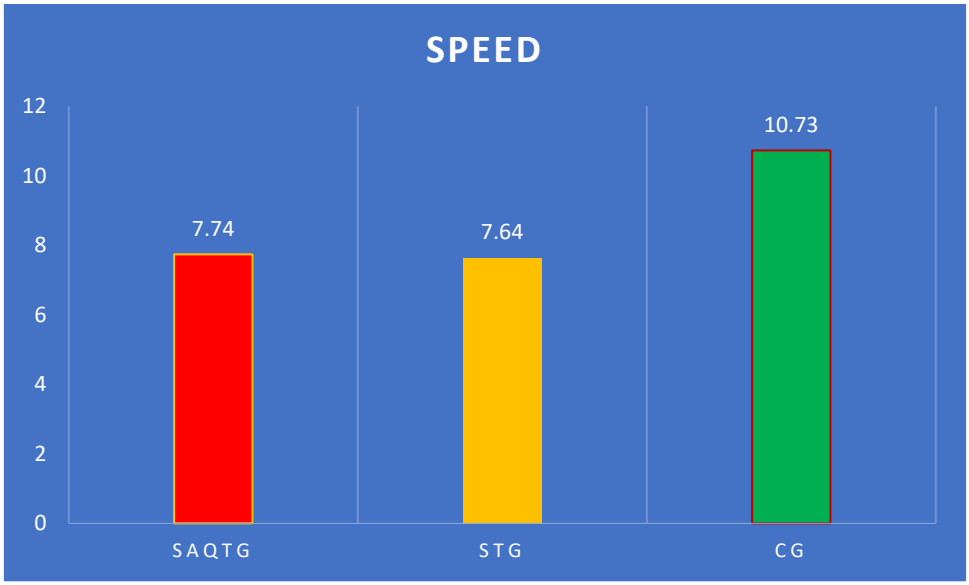
Computation of Analysis of Covariance of Mean of SAQ Training Group, Sand Training Group and Control Groups on Speed

	SAQTG	STG	CG	Source of Variance	Sum of Squares	df	Means Squares	F-ratio
Pre-Test Means	8.30	8.17	8.33	Between Sets	0.40	2	0.20	0.33
				Within Sets	52.21	57	0.60	
Post-Test Means	7.75	7.62	8.41	Between Sets	10.92	2	5.46	14.30*
				Within Sets	33.23	57	0.38	
Adjusted Post-Test Means	7.74	7.64	10.73	Between Sets	10.19	2	5.09	14.33*
				Within Sets	30.58	57	0.36	

*Significant at 0.05 level of confidence (2.71)

Table – 2, At the 0.05 level of confidence, the speed pre-test's 'F' value of 0.33 was under the critical value of 2.71 for the degrees of freedom of 2 and 57. The results showed that there was no significant difference in the mean speed of the SAQTG, STG, and Control groups before to the start of their respective training. The results of the study show that the participants' random assignment into three groups was successful. Based on the results in Table II, the speed post-test's "F" value was 14.30, was greater than the critical value of 2.71 for degrees of freedom 2 and 57 at the 0.05 level of confidence. Since it was higher than the critical value of 2.71, the observed F-value on post-test averages among the groups SAQTG, STG, and control group on speed was very significant. Results demonstrated that the two interventions, SAQTG and STG, resulted in notably distinct increases in speed.

For speed, the adjusted post-test mean scores for the control group, resistance training group, and sports training group were 10.73, 7.74, and 7.64 respectively.



(Fig- 1) Adjusted Post-Test Differences of the SAQ Training Group, Sand Training Group and Control Group on Speed

Table - 3

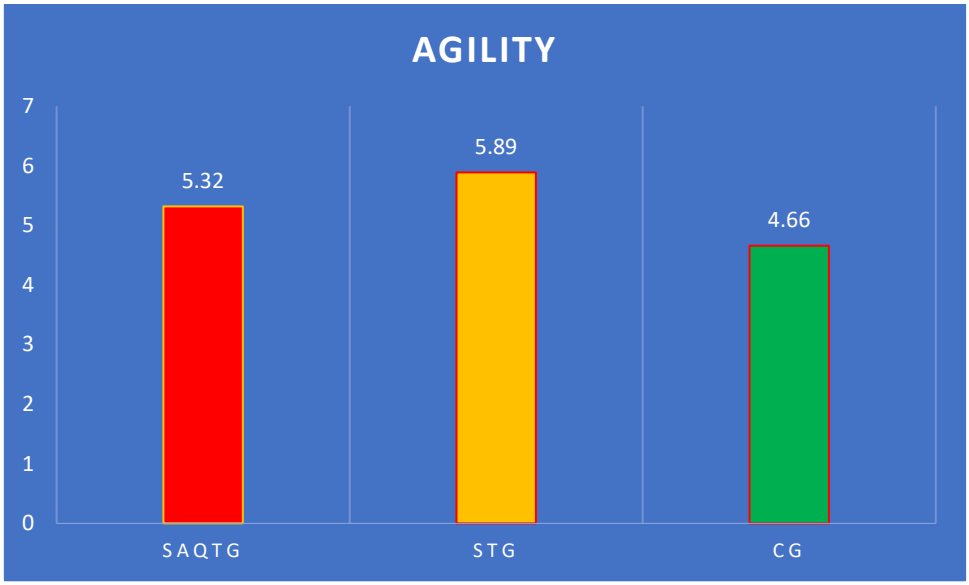
Computation of Analysis of Covariance of Mean of SAQ Training Group, Sand Training Group and Control Groups on Agility

	SAQTG	STG	CG	Source of Variance	Sum of Squares	df	Means Squares	F-ratio
Pre-Test Means	5.07	5.00	5.4	Between Sets	80.17	2	40.09	2.59
				Within Sets	396.78	57	4.56	
Post-Test Means	5.37	5.86	5.1	Between Sets	7.52	8	3.76	14.58*
				Within Sets	11.44	57	0.26	
Adjusted Post-Test Means	5.32	5.89	4.66	Between Sets	7.95	2	3.97	15.59*
				Within Sets	21.91	57	0.25	

*Significant at 0.05 level of confidence (2.71)

Table – 3, At the 0.05 level of confidence, the speed pre-test's 'F' value of 2.59 was under the critical value of 2.71 for the degrees of freedom of 2 and 57. The results showed that there was no significant difference in the mean speed of the SAQTG, STG, and Control groups before to the start of their respective training. The results of the study show that the participants' random assignment into three groups was successful. Based on the results in Table II, the speed post-test's "F" value was 14.58, was greater than the critical value of 2.71 for degrees of freedom 2 and 57 at the 0.05 level of confidence. Since it was higher than the critical value of 2.71, the observed F-value on post-test averages among the groups—SAQTG, STG, and control group on speed—was very significant. Results demonstrated that the two interventions, SAQTG and STG, resulted in notably distinct increases in speed.

For speed, the adjusted post-test mean scores for the control group, resistance training group, and sports training group were 5.32, 5.89 and 4.66 respectively.



(Fig-2) Adjusted Post-Test Differences of the SAQ Training Group, Sand Training Group and Control Groups on Agility

Table - 4

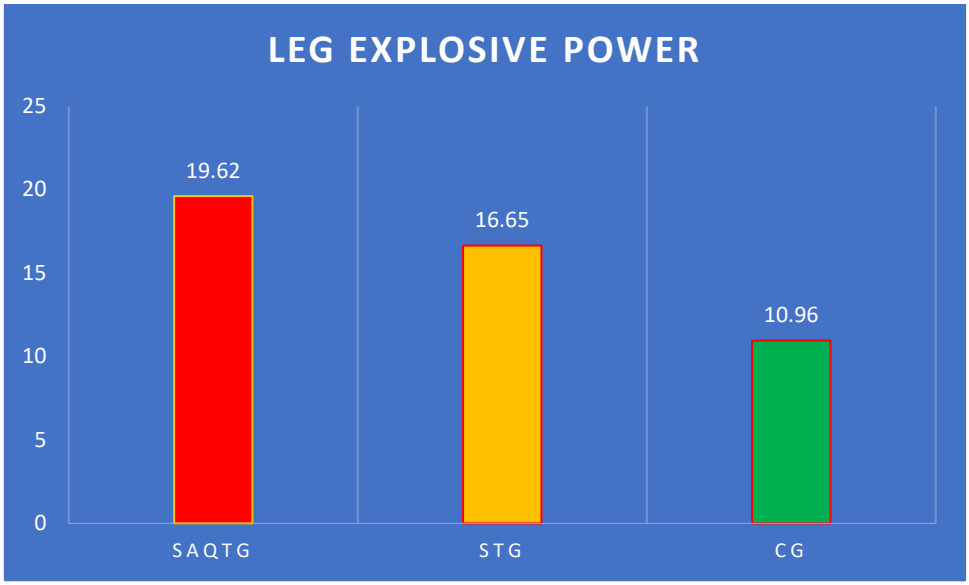
Computation of Analysis of Covariance of Mean of SAQ Training Group, Sand Training Group and Control Groups on Leg Explosive Power

	SAQTG	STG	CG	Source of Variance	Sum of Squares	df	Means Squares	F-ratio
Pre-Test Means	11.30	11.37	10.83	Between Sets	5.07	2	2.53	0.88
				Within Sets	249.43	57	2.87	
Post-Test Means	19.70	16.77	10.77	Between Sets	1244.09	2	622.04	10.11*
				Within Sets	5355.03	57	61.55	
Adjusted Post-Test Means	19.62	16.65	10.96	Between Sets	1142.13	2	571.07	9.32*
				Within Sets	5267.10	57	61.25	

*Significant at 0.05 level of confidence (2.71)

Table – 4, At the 0.05 level of confidence, the speed pre-test's 'F' value of 0.88 was under the critical value of 2.71 for the degrees of freedom of 2 and 57. The results showed that there was no significant difference in the mean speed of the SAQTG, STG, and Control groups before to the start of their respective training. The results of the study show that the participants' random assignment into three groups was successful. Based on the results in Table II, the speed post-test's "F" value was 10.11, was greater than the critical value of 2.71 for degrees of freedom 2 and 57 at the 0.05 level of confidence. Since it was higher than the critical value of 2.71, the observed F-value on post-test averages among the groups—SAQTG, STG, and control group on speed—was very significant. Results demonstrated that the two interventions, SAQTG and STG, resulted in notably distinct increases in speed.

For speed, the adjusted post-test mean scores for the control group, resistance training group, and sports training group were 19.62, 16.65 and 10.96 respectively.



(Fig-3) Adjusted Post-Test Differences of the SAQ Training Group, Sand Training Group and Control Groups on Leg Explosive Power

Discussion on Findings

Based on the study's findings, cricket players' speed, agility, and leg explosive power are among the motor fitness variables that improve by SAQ and sand training. specifically, when compared to the control group, the SAQ training group and the sand training group both provide significant improvements. The findings of Dhapola's (2017) study on the effect of SAQ training on cricket players' agility and endurance were confirmed by this one. The results revealed that the experimental and control groups of cricket players differed significantly in terms of agility and endurance. Prasad (2018) researched how different workout regimes improved junior basketball players' physiological and anthropometric motor fitness. The result indicates that basketball players selected anthropometric, motor fitness, and physiological characteristics significantly improve with the different training package. Sivasankar (2021) investigated the way particular coordination abilities of collegiate players of large area games were affected by fartlek and sand training. According to the study's results, there was no discernible difference in the chosen coordination skills between the fartlek and sand training groups.

Conclusions

From the analysis of the data, the following conclusions were drawn

When compared to the control group, the present research shows that both SAQ training and Sand training significantly improve motor fitness features, specifically speed, agility, and leg explosive power. The study also notes that the SAQ training group outperformed the control group and the Sand training (ST) group, showing an important rise in speed. However, compared to the control group and the SAQ group, the ST group revealed significantly improved agility. Lastly, compared to the ST group and the control group, the SAQ training group showed significant improvements in leg explosive power.

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