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Effect of yogic practices and physical exercise on speed and agility among male cricket players

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Abstract

The purpose of the study was to find out the effects of yoga practice and physical exercise on speed and agility among male cricket players. To achieve the purpose of this study, forty eight college cricket players studying in various colleges affiliated to Bharathidasan University were randomly selected as subjects. Their age ranged from seventeen to twenty years. The selected subjects (N=48) were divided into three equal groups and named Group-I as yogic practice group, Group-II as physical exercises group and Group-III as control group each group consisting of sixteen subjects. Subjects in the Group-I underwent the yogic practice, subject in the Group-II underwent the physical exercises and subjects in the Group-III did not go through any specific yogic (or) physical exercise but their regular practice. During the training period, training was given for both experimental groups, the yogic practice and physical exercises were given for twelve weeks, five days per week for forty five minutes each day in the morning session under the supervision of the investigator. The physical variables namely speed and agility. Physical parameters were measured by standard tests namely fifty meters run, shuttle run. The data was collected before and after the experimental treatment. Analysis of covariance (ANCOVA) was used to analyse the collected data. Scheffe's test was followed as a post hoc test to determine the level of significant difference between the paired means. All of the statistical analyses were computed at 0.05 level of significance. Yogic practice and physical exercises groups had shown significant changes in speed and agility when compared to control group among male cricket players. Physical exercise group are better than yogic practice on speed and agility among male cricket players.

Keywords: Yoga, physical exercise, speed and agility

Introduction

Today the game of cricket is widely played in three formats. The test match, fifty overs one day international and twenty-20 (T-20). The game of cricket is a high energy team sport. It is attractive and at the same time very agile. Performance in cricket is determined by several factors like skill, technique, fitness, and training.

Yoga is a complete system of physical, mental, social and spiritual development. For generations, this philosophy was passed on from the master-teacher to the student. The first written records of the practice of yoga appeared around 200 B.C. in yogasutra of Patanjali. The system consisted of the eightfold path or Asthanga yoga (Manikandan & Sethu 2017) [3].

Yoga has contributed a lot in various sports and games which was documented in various studies. Cricket is a long duration game. It consumes more time both limited overs match and test matches. This period requires complete concentration on the part of the players. Development of concentration, self-confidence and patience could be done effectively through regular practice of yoga. There are certain specific asana which contribute towards the building of personality both physical and mental. The role of yoga in the improvement of batting skill is vital. Yoga helps the player in observing the delivery of the ball and hit with promptness. Eye and hand co-ordination come forth simultaneously.

Physical exercises are an orderly or systematic movement of body parts with or without equipments with an objective to better performance. Generally exercises are focused on improving the motor qualities, rhythm etcetera and most of the exercises are repeated to get perfection. Exercise from the practical point of view may be formulated as "any bodily exertion for the sake of keeping the organs and their functions in a healthy state" (Karambelkar, 1971) [2].

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Purpose of the study

The purpose of the study was to find out the effects of yoga practice and physical exercise on speed and agility among male cricket players.

Methodology

To achieve the purpose of this study, forty eight college cricket players studying in various colleges affiliated to Bharathidasan University were randomly selected as subjects. Their age ranged from seventeen to twenty years. The selected subjects (N=48) were divided into three equal groups and named Group-I as yogic practice group, Group-II as physical exercises group and Group-III as control group each group consisting of sixteen subjects. Subjects in the Group-I underwent the yogic practice, subject in the Group-II underwent the physical exercises and subjects in the Group-III did not go through any specific yogic (or) physical

exercise but their regular practice. During the training period, training was given for both experimental groups, the yogic practice and physical exercises were given for twelve weeks, five days per week for forty five minutes each day in the morning session under the supervision of the investigator. The physical variables namely speed and agility. Physical parameters were measured by standard tests namely fifty meters run, shuttle run.

Analysis of the data

The data was collected before and after the experimental treatment. Analysis of covariance (ANCOVA) was used to analyze the collected data. Scheffe’s test was followed as a post hoc test to determine the level of significant difference between the paired means. All of the statistical analyses were computed at 0.05 level of significance.

Table 1: Analysis of covariance of pre, post and adjusted posttest means of yogic practice, physical exercises and control groups on speed and agility

Test	Yogic practice group	Physical exercises group	Control group	SOV	SS	df	MS	F-ratio
Speed Pre test								
Mean	7.37	7.36	7.38	B.M.	0.002	2	0.001	0.76
SD(±)	0.036	0.04	0.02	W.G.	0.058	45	0.001	
Post test								
Mean	7.10	6.61	7.38	B.M.	4.92	2	2.46	24.97*
SD(±)	0.30	0.44	0.02	W.G.	4.43	45	0.09	
Adjusted Post Test								
Mean	7.10	6.59	7.40	B.S.	5.22	2	2.61	27.92*
Agility Pre test								
Mean	12.28	12.29	11.99	B.M.	0.91	2	0.45	0.87
SD(±)	0.03	0.03	1.25	W.G.	23.56	45	0.52	
Post test								
Mean	12.09	11.78	12.27	B.M.	1.96	2	0.98	31.88*
SD(±)	0.07	0.28	0.05	W.G.	1.38	45	0.03	
Adjusted post test								
Mean	12.09	11.78	12.27	B.S.	1.90	2	0.95	30.34*
				W.S.	1.38	44	0.03	

SOV – Source of variance SS – Sum of square df – degrees of freedom

MS – Mean square B.M. –Between mean W.G. – Within groups

B.S. – Between sets W.S. – Within set

Significant at 0.05 level of confidence. (The table values required for significance at 0.05 level of confidence for 2 & 45 and 2 & 44 are 3.20 and 3.21 respectively)

The table I shows that the obtained ‘F’ ratio speed 0.76 and agility 0.87 for pre-test means was less than the table value, 3.20 for df 2 and 45 required for significance at 0.05 level of confidence. The obtained ‘F’ ratio speed 24.97 and agility 31.88 for post-test means was greater than the table value 3.20 for df 2 and 45 required for significance at 0.05 level of confidence. The obtained ‘F’ ratio of speed 27.92 and agility

30.34 for adjusted post-test means was greater than the table value of 3.21 for df 2 and 44 required for significance at 0.05 level of confidence. The results of the study indicated that there was a significant difference among the adjusted post-test means of yogic practice, physical exercises and control groups on speed and agility.

Table 2: The scheffe’s post hoc test for the difference between paired means of yogic practice, physical exercises and control groups on speed and agility

Yogic practice group	Physical exercises group	Control group	MD	CI
Speed				
7.10	6.59	-	0.51*	0.25
7.10	-	7.40	0.30*	
-	6.59	7.40	0.81*	
Agility				
12.09	11.78	-	0.30*	0.15
12.09	-	12.27	0.17*	
-	11.78	12.27	0.48*	

*Significant at 0.05 level of confidence.

The table II shows that the mean difference values between yogic practice group and physical exercises group, yogic practice and control group and physical exercises group and control group are 0.51, 0.30 and 0.81 respectively which are greater than the confidence interval value 0.25 at 0.05 level of confidence on speed. And agility is 0.30, 0.17 and 0.48

respectively which are greater than the confidence interval value 0.15 at 0.05 level of confidence on agility. The results of the study showed that the Physical exercise group are better than yogic practice on speed and agility among male cricket players.

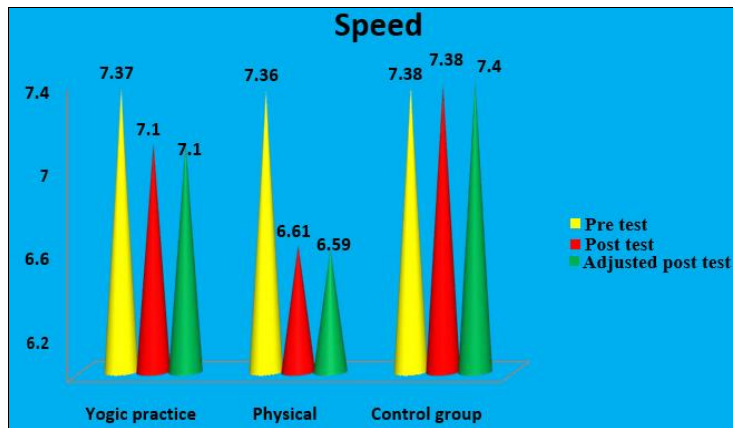


Fig 1: The pre, post and adjusted mean values of yogic practice, physical exercises and control groups on speed

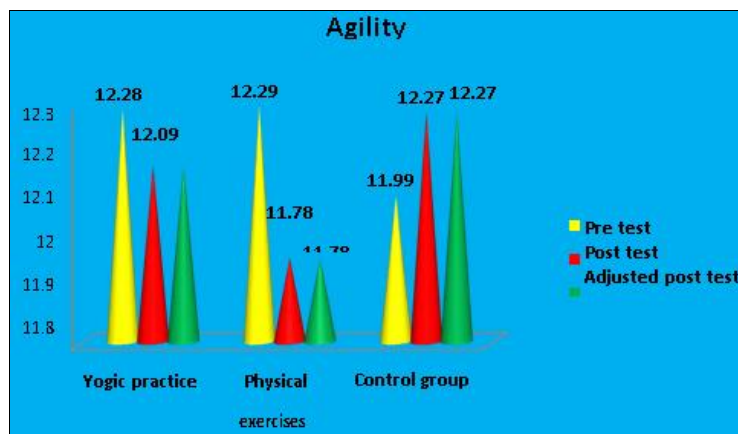


Fig 2: The pre, post and adjusted mean values of yogic practice, physical exercises and control groups on agility

Discussion on Findings

The results of the study indicated that the experimental group’s namely yogic practice and physical exercises had a significant influence on speed and agility among male college cricket players. Also Physical exercise group are better than yogic practice on speed and agility among male cricket players. The findings of the present study were supported by many research findings, Weinberg *et al.* (1980) [7], Kalidasan (1998) [1], Mohan (1999) [4], Sethu (2016) [6] and Samsudeen & Kalidasan (2011) [5].

Conclusion

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

1. The cricket players of the yogic practice and physical exercises groups had shown significant changes in speed and agility when compared to control group among male cricket players.
2. The physical exercise group was better than the yogic practice group on speed and agility among male college cricket players.
3. The control group had not shown significant on speed and agility among male college cricket players.

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