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Effect of yogic practices and physical exercise on psychological variables among male cricket players

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Abstract

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 psychological variables namely somatic and cognitive anxiety. Psychological parameters were measured by standard tests namely competitive state anxiety questionnaire-II (CSAI-2) developed by Martens, Burton, Vealey, Bump and Smith (1990). 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

Sports psychology is the science of applying psychology to sports. It is a study of behavioral science in sports setting. Sports psychology is gradually and steadily gaining momentum in the field of training of high level sportspersons. Today, sport is no more a recreation. It is not just a game of nerves as well. With the winning margin of competitive sport narrowing down to fraction of seconds, modern day sport warrants an essential supply of psychological support to come to term with reality. (Cox et.al, 1993) [2].

Weinberg et.al. (1995) [9] wrote that in any sport, a player's success or failure results from a combination of physical and mental abilities. Most coaches consider that sport is at least fifty percent mental, with certain sports such as golf, tennis and figure skating, consistently receiving percentages in the eighty percent to ninety percent range. According to Smith (1994) [8], a former English Cricketer, "Cricket is played in the mind, more than any other game" (Manikandan & Sethu, 2017) [3].

Purpose of the study

The purpose of the study was to find out the effects of yoga practice and physical exercise on psychological variables 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,

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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 psychological variables namely somatic and cognitive anxiety. Psychological parameters were measured by standard tests namely competitive state anxiety questionnaire-II (CSAI-2) developed by Martens, Burton, Vealey. 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.

Analysis of the data

Table 1: Analysis of covariance of pre, post and adjusted posttest means of yogic practice, physical exercises and control groups on flexibility and cognitive and somatic anxiety

Test	Yogic practice group	Physical exercises group	Control group	SOV	SS	df	MS	F-ratio
Cognitive Anxiety								
Pre test								
Mean	25.68	25.62	24.68	B.M.	10.04	2	5.02	0.84
SD(±)	2.15	2.09	2.98	W.G.	268.62	45	5.96	
Post test								
Mean	20.43	22.06	24.50	B.M.	133.79	2	66.89	25.32*
SD(±)	1.09	1.43	2.16	W.G.	188.87	45	2.64	
Adjusted post test								
Mean	20.43	22.07	24.47	B.S.	126.61	2	63.30	23.53*
Somatic Anxiety								
Pre test								
Mean	17.25	17.06	18.62	B.M.	23.29	2	11.64	0.72
SD(±)	0.85	0.99	6.83	W.G.	727.68	45	16.17	
Post test								
Mean	14.56	15.93	17.31	B.M.	60.50	2	30.25	21.84*
SD(±)	1.09	1.38	1.01	W.G.	62.31	45	1.38	
Adjusted post test								
Mean	14.53	15.89	17.38	B.S.	63.78	2	31.89	24.08*
				W.S.	58.25	44	1.32	

SOV – Source of variance, SS – Sum of squar, 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 3.21respectively)

The table I shows that the obtained 'F' ratio cognitive anxiety 0.84 and somatic anxiety 0.72 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 cognitive anxiety 25.32 and somatic anxiety 21.84 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 cognitive anxiety 23.53 and somatic anxiety 24.08 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 cognitive anxiety and somatic anxiety.

Table 2: The scheffe's post hoc test for the difference between paired means of yogic practice, physical exercises and control groups on cognitive and somatic anxiety

Yogic practice group	Physical exercises group	Control group	MD	CI
Cognitive anxiety				
20.43	22.07	-	1.64*	1.41
20.43	-	24.47	4.04*	
-	22.07	24.47	2.4*	
Somatic anxiety				
14.53	15.89	-	1.36*	0.96
14.53	-	17.38	2.85*	
-	15.89	17.38	1.49*	

*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 1.64, 4.04 and 2.4 respectively which are greater than the confidence interval value 1.41 at 0.05 level of confidence on cognitive anxiety. And resting heart rate is

1.36, 2.85 and 1.49 respectively which are greater than the confidence interval value 0.96 at 0.05 level of confidence on somatic anxiety. The results of the study showed that the yogic practice group is better than physical exercise on cognitive and somatic anxiety among male cricket players.

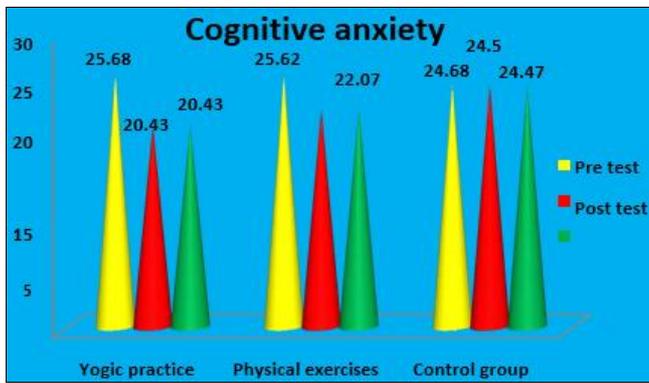


Fig 1: The pre, post and adjusted mean values of yogic practice, physical exercises and control groups on cognitive anxiety.

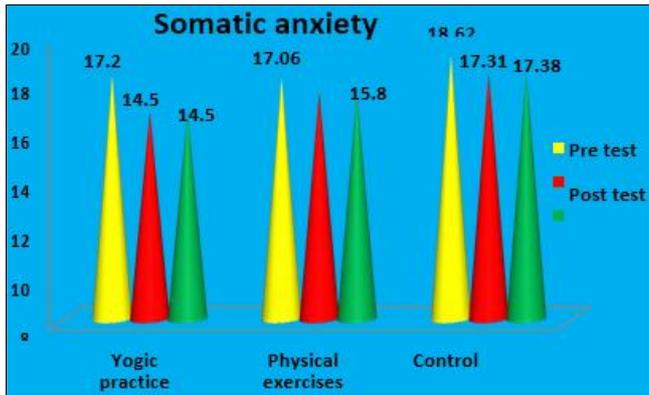


Fig 2: The pre, post and adjusted mean values of yogic practice, physical exercises and control groups on somatic anxiety.

Discussion on Findings

The results of the study indicated that the experimental groups namely yogic practice and physical exercises had a significant influence on cognitive and somatic anxiety among male college cricket players. The results of the study showed that the yogic practice group is better than physical exercise on cognitive and somatic anxiety among male cricket players. The findings of the present study were supported by many research findings Chandrasekaran (1999) [1], Padmadevi (2007) [4], Sethu (2016 & 2016a) [6, 7] and Samsudeen & Kalidasan (2011) [5].

Conclusions

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 cognitive and somatic anxiety when compared to control group among male cricket players.
2. The yogic practice group was better than physical exercise on cognitive and somatic anxiety male college cricket players.
3. The control group had not shown significant change on cognitive and somatic anxiety male college cricket players.

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