



## An Analytical Study on Psychological Variables of Sprinters Jumpers and Throwers

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### Abstract

*The purpose of the study was to analyse the psychological variables of the sprinters, jumpers and throwers. To achieve the purpose of this study, totally thirty male athletes in which 10 sprinters, 10 jumpers and 10 throwers were selected from Tirunelveli district, Tamilnadu state and their age ranged between 18 and 25 years. The subjects were tested on selected variables namely cognitive anxiety, somatic anxiety and self confidence were assessed by CSAI-II Inventory (Marten's, 1995). To test the significance of the mean difference among the sprinters, jumpers and throwers analysis of variance (ANOVA) was used. In case of any significance of mean difference on the criterion measure, to find out which pair was better among the others, the Scheffe's post – hoc test was applied. The result reveals that there was significant difference on selected variables among the sprinters, jumpers and throwers. Cognitive anxiety of jumpers having better cognitive anxiety control followed by throwers and sprinters. Somatic anxiety of throwers having better somatic anxiety control followed by jumpers and sprinters. Self confidence of sprinters having better followed by throwers and jumpers.*

**Keywords:** Cognitive Anxiety, Somatic Anxiety, Self Confidence, Sprinters, Throwers, Jumpers.

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### Introduction

Sport is as old as human society itself. It is an institution, which has its own traditions and values. Being an institutionalized and competitive activity, it involves vigorous physical exertion and the use of relatively complex physical skills by individuals whose participation is motivated by a combination of intrinsic satisfaction associated with the activity itself and external rewards earned through participation. Sport as an activity offers an opportunity for self-knowledge, self-expression, and fulfillment; personal achievement, skill acquisition and demonstration of ability; social interaction, enjoyment, good health and well-being. It promotes involvement, integration and responsibility in society and contributes to the development of society, especially when sports activities have been accepted as an integral part of the culture of every society in every nation (Kumar, 2000).

Sports psychology is the application of psychological principles to sport and psychological activity at all levels of skill development. Sports psychology is the branch of sports and exercise science that seeks to provide answers to questions about human behavior in sports. Sports psychology is the application of psychological principles to sport and physical activity at all levels of skill development. Sports psychology is the scientific study of people and their behaviors in sport.

The main job of a sports psychologist is to recognize how participation in sport exercise and physical activity enhances a person's development (Cox, 2002).

Sports psychology is a specialization within psychology that seeks to understand psychological/mental factors that affect performance in sports, physical activity and exercise and apply these to enhance individual and team performance. It deals with increasing performance by managing emotions and minimizing the psychological effects of injury and poor performance. Some of the most important skills taught are goal setting, relaxation, visualization, self-talk awareness and control, concentration, using ritual, attribution training, and periodization. The Western and Eastern journals of physical education, sports medicine and sports psychology, were instrumental in spreading the cult of sports psychology throughout the world. Despite the strong theoretical and research backing, the sports physiologists have not realized that much of human physiology was controlled by human psychology and that the psychological preparation in sports was inconsequential in the absence of the study of human behavior as related to competitive sports. Consequently the sports psychologists took over where the sports physiologists had left (Kamlesh, 2002). It is realized that in the modern highly competitive sports world, the psychological preparation of sportsmen is an important component of the total preparation of sportsmen for better performance.

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## Methodology

The purpose of the study was to analyse the psychological variables of the sprinters, jumpers and throwers. To achieve the purpose of this study, totally thirty male athletes in which 10 sprinters, 10 jumpers and 10 throwers were selected from Tirunelveli district, Tamilnadu state and their age ranged between 18 and 25 years. The subjects were tested on selected variables

namely cognitive anxiety, somatic anxiety and self confidence were assessed by CSAI-II Inventory (Marten's, 1995 ). To test the significance of the mean difference among the sprinters, jumpers and throwers analysis of variance (ANOVA) was used. In case of any significance of mean difference on the criterion measure, to find out which pair was better among the others, the Scheffe's post – hoc test was applied.

## Results

**Table I.** Mean and standard deviation of selected psychological variables of sprinters, jumpers and throwers

Sl.No	Variables	State	Mean	SD
1	Cognitive Anxiety	Sprinters	23.70	± 5.53
		Jumpers	19.90	± 1.91
		Throwers	20.10	± 3.07
2	Somatic Anxiety	Sprinters	22.90	± 4.30
		Jumpers	19.80	± 1.93
		Throwers	19.70	± 2.05
3	Self Confidence	Sprinters	31.40	± 2.22
		Jumpers	27.70	± 2.58
		Throwers	27.75	± 2.49

The mean and standard deviation of selected psychological variables of sprinters, jumpers and throwers were numerically presented in the above table. The table reveals that the mean scores on cognitive anxiety of jumpers (19.90) having better cognitive anxiety control followed by throwers (20.10) and

sprinters (23.70). And for somatic anxiety the throwers (19.70) having better somatic anxiety control followed by jumpers (19.80) and sprinters (22.90). And in case of self confidence sprinters (31.40) having better followed by throwers (27.75) and jumpers (27.70).

**Table II.** Analysis of variance of selected psychological variables of sprinters, jumpers and throwers

Sl. No	Variables	Source of variation	Sum of Squares	df	Mean Squares	F-value
1	Cognitive Anxiety	BG	91.46	2	45.73	3.13
		WG	393.90	27	14.58	
2	Somatic Anxiety	BG	66.20	2	33.10	3.74*
		WG	238.60	27	8.83	
3	Self Confidence	BG	91.26	2	45.63	7.67*
		WG	160.60	27	5.94	

\*  $P < 0.05$  Table F, df (2,27) (0.05) = 3.35

In table II, the results of analysis of variance on somatic anxiety (3.74) and self confidence (7.67) among the different athletes were greater than the table value of 3.35 indicating that it was significant ( $P < 0.05$ ) for the degrees of freedom (2,27) at 0.05 level of confidence. And in case of cognitive anxiety (3.13) was lesser than the table value of 3.35 indicating that it was insignificant

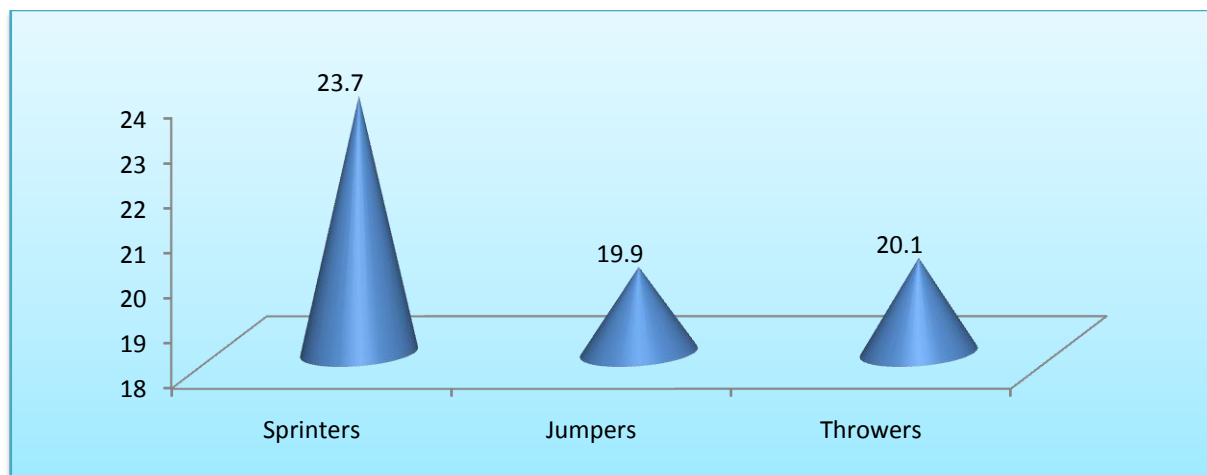
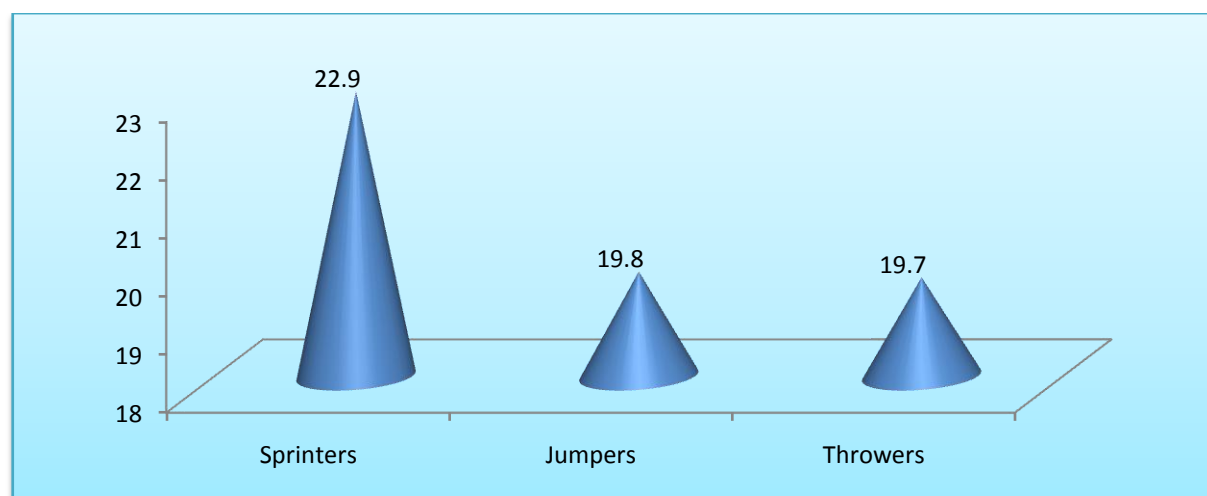
( $P < 0.05$ ) for the degrees of freedom (2,27) at 0.05 level of confidence. Since the F value was significant for somatic anxiety and self confidence, the scheffe's post-hoc test was further computed to find out which pair was better among others and the results are tabulated in the table III.

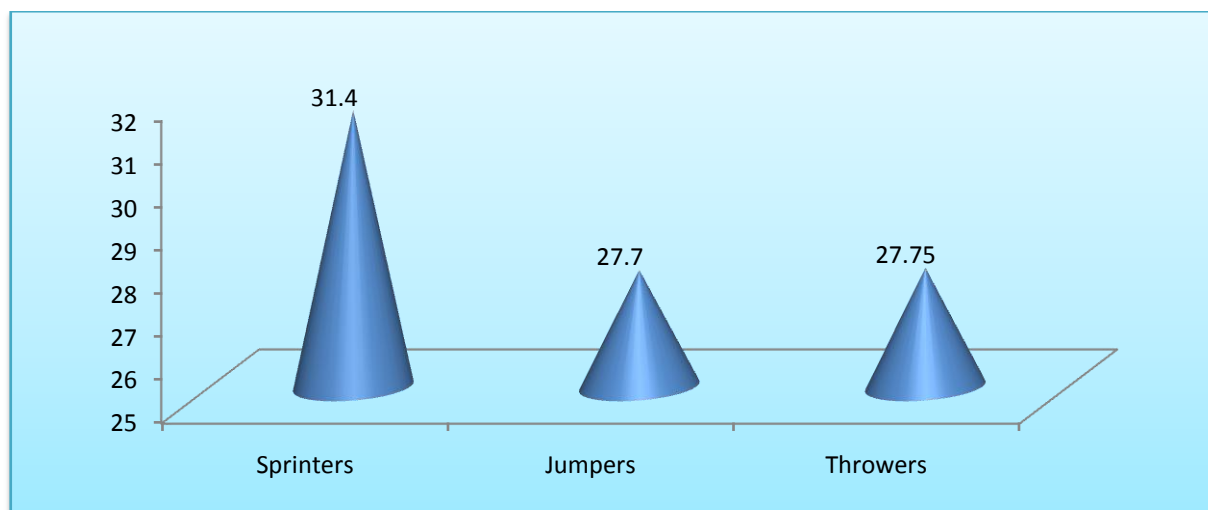
**Table III.** Scheffe's post-hoc test for selected psychological variables of sprinters, jumpers and throwers

Sl.No	Variables	Means			Mean Difference	CI
		Sprinters	Jumpers	Throwers		
1	Somatic Anxiety	22.90	19.80	---	3.10*	3.03
		22.90	-----	19.70	3.20*	3.03
		-----	19.80	19.70	0.10	3.03
2	Self Confidence	31.40	27.70	---	3.70*	2.82
		31.40	-----	27.75	3.65*	2.82
		-----	27.70	27.75	0.05	2.82

From the table III it can be seen that the mean differences of somatic anxiety between sprinters and jumpers, sprinters and throwers (3.10 & 3.20) and for self confidence between sprinters and jumpers, sprinters and throwers (3.70 & 3.65) between respectively, greater than the confidential interval value (3.03 & 2.82), which

was significant at 0.05 level of confidence. The mean differences of jumpers and throwers of both somatic anxiety and self confidence (0.10 & 0.05) respectively, were lesser than the confidential interval value (3.70 & 3.65) which was insignificant at 0.05 level of confidence.

**Figure I.** Bar diagram showing the means of cognitive anxiety of sprinters, jumpers and throwers**Figure II.** Bar diagram showing the means of somatic anxiety of sprinters, jumpers and throwers

**Figure III.** Bar diagram showing the means of self confidence of sprinters, jumpers and throwers

### Conclusions

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

1. The result reveals that there was significant difference on selected variables among the sprinters, jumpers and throwers.
2. Cognitive anxiety of jumpers having better cognitive anxiety control followed by throwers and sprinters.
3. Somatic anxiety of throwers having better somatic anxiety control followed by jumpers and sprinters.
4. Self confidence of sprinters having better followed by throwers and jumpers.

### References

1. Cox, R.H. (2002). *Sport psychology: Concepts and application*, (5th ed). Missouri, Columbia: McGraw Hill.
2. Jarvis, Matt (2006). *Sports Psychology: A Student's Handbook*. Volume 10, Psychology Press.
3. Kamlesh M.L. (2002). *Psychology in Physical Education and Sport*, (4<sup>th</sup> rev. ed), New Delhi: Metropolitan Book Company Private Limited.
4. Kumar, Ashok. (2000). *International Encyclopaedia of Sports and Games*. New Delhi: Mittal Publications.
5. Lopez, Shane J. (2009). *The Encyclopedia of Positive Psychology*. Malden, MA: Blackwell Publishing Limited.
6. Martens, Rainer., Vealey, Robin S. and Burton, Damon. (1995). *Competitive Anxiety in Sport*. Champaign, IL: Human Kinetics.