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A study on precompetitive anxiety of university level male tennis and table tennis players

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Abstract

The purpose of this study was to compare pre-competitive anxiety of university level male tennis and table tennis players. A total of twenty (N=20) male racket sports players with their age ranging between 17 to 23 years were selected. Further the total subjects were divided into 10 subjects each from tennis and table tennis sports practices. The subjects were selected from the Lakshmbai National Institute of Physical Education both Gwalior and Guwahati center. In order to measure the pre competitive anxiety level, questionnaires as the tool such as Illinois self-evaluation Inventory and Sports competition anxiety test (SCAT) were implemented on racket players for data collection. In order to analyze the data collected descriptive statistics such as mean, standard deviation and comparative statistics of multivariate analysis of variance was employed and was tested at 0.05 level of significance. The multivariate analysis was found to be insignificant in the sub factors of pre-competitive anxiety between tennis and table tennis players as the value of Wilks' lambda (0.673) was found to be insignificant at 0.05 level of significance ($p= 0.297$). The insignificant value of MANOVA depicted that the sub factors of pre-competitive anxiety was at similar levels when compared between the male tennis and table tennis sports players.

Keywords: Pre- competitive anxiety, illinois self-evaluation inventory, sports competition anxiety test (scat), descriptive statistics, level of significance, multivariate analysis of variance

Introduction

The word anxiety denotes study of human behaviour, whereas sports anxiety means a sub discipline of psychology that deals with the anxiety of athletes and teams involved in competitive sports. Sports anxiety is concerned with human anxiety on the field both under practice and competitive situation bringing about qualitative improvement in performance and maintain the same during competition. According to Browne and Mahoney, "Sports anxiety is the application of psychological principles to sports and physical activity at all level of skill improvement.

Human anxiety is a multifaceted thing making us immensely curious about understanding it. We indeed want to know what and why do we experience happiness, sadness or fear and make us act or react in certain ways. All individuals have their own pace of doing things, some are quick while others take time. Many questions pops in our minds, as we want to understand human nature, experience and behaviour. In a way the studying anxiety helps us to answer these questions in a logical manner. The meaning of the word anxiety reveals dealing with the study of human behaviour and particularly the word sports anxiety deals with the sub-discipline that focuses on the anxiety of athletes and other associates engaged in competitive sports. Sports anxiety as a branch of psychology is closely concerned with human anxiety in and on the play field, both in the practice and competitive situation. Anxiety is studying the human behaviour with an importance on the mental aspect in sports settings.

Some facts under an anxiety as related to exercise and sport reveals that without certain level of anxiety, competitive performances are not possible. Neither too high nor low level of anxiety is healthy to athletic performance. The athlete gives out their best performance with an optimum level of anxiety. The edge of optimal anxiety level varies from athlete to athlete and also from situation to situation.

When the level of anxiety falls there is rise in the level of performance and it is also established that inexperienced athletes are less anxious than experienced athletes. In many sports situations, the relationship between anxiety and performance is direct while in others it is indirect possibly depending upon what subcomponent is under focus.

A long-term assignment in sports is vital before one could assume hopeful results in recording anxiety and to be more precise reducing trait anxiety. Situational anxiety is an environmental spectacle and has a lot to do with exterior variables manipulated or controlled in order to decrease its effect. Pre-competitive anxiety is unavoidable under all competitive situations and all athletes are affected by it. Pre-competitive anxiety has serious detrimental effect on the performance of elite and experienced athletes. Anxiety is associated with fear in participating and competing by athletes regardless of their sex and age. Athletes tend to have variation of fears, at almost all stages of their sporting career. The more the similarity between the practice conditions and competitive situations the better the athletes learn to handle with competitive anxiety. Cratty stated that conditions within sports person united with his/her cognitive estimations of the threat of competition and also with the objective nature of competition itself work combinedly to produce anxiety in sports person. The purpose of the present investigation was to shed light upon the pre-competitive anxiety level as compared between the university level racket sports players of tennis and table tennis sports practices.

Methods

Selection of Subjects

For fulfilling the purpose of this study, a total of twenty (N=20) male university level racket sports players with their age ranging between 17 to 23 years from Lakshmbai National Institute of Physical Education, Gwalior and Guwahati centres were selected. Further the total subjects were divided into 10 subjects each from tennis and table tennis sports players.

Selection of Variable

The variable selected for this study between university level tennis and table tennis players was pre-competitive anxiety. For data collection and measuring the variable of precompetitive anxiety, questionnaires were administered on tennis and table tennis players. For measuring anxiety two questionnaires were administered on the subjects namely, Illinois Self-Evaluation Inventory also known as Competitive State Anxiety Inventory-2 developed by Marten *et al.* (1990) ^[8] to measure existing states of anxiety in a competitive situation based on three subfactors such as-Cognitive Anxiety, Somatic Anxiety, Self-Confidence. Sports Competition Anxiety Test (SCAT). The second questionnaire was Sports Competition Anxiety Test (SCAT) developed by Martens (1977) ^[9] is a self-reporting

questionnaire about anxiety which analyses an athlete's responses to a series of statements in two forms (Y1 & Y2) about how they feel in a competitive situation.

Statistical Technique

In order to analyze the data collected, descriptive statistics such as mean, standard deviation and comparative statistics to analyze the variable of precompetitive anxiety multivariate analysis of variance (MANOVA) was employed and was tested at 0.05 level of significance.

Results

The interpretation of data and discussion of findings of the total twenty male (N = 20) racket sports players where further the players were divided into 10 players in each group, *viz.*, tennis (N=10) and table tennis (N=10) respectively were investigated on the basis of the psychological variable of subfactors of precompetitive anxiety. The descriptive statistics and the multivariate analysis have been presented in the following tables.

Table 1: Descriptive Statistics on Pre-Competitive Anxiety between Tennis and Table Tennis Players

	Sports Group	Mean	Std. Deviation	N
Cognitive Anxiety	Tennis	21.50	3.56	10
	Table Tennis	20.80	4.94	10
	Total	21.15	4.20	20
Somatic Anxiety	Tennis	19.40	2.59	10
	Table Tennis	18.70	3.30	10
	Total	19.05	2.91	20
Self Confidence	Tennis	26.40	4.19	10
	Table Tennis	28.90	6.75	10
	Total	27.65	5.62	20
SCAT-Y1	Tennis	43.40	5.71	10
	Table Tennis	38.60	7.57	10
	Total	41.00	6.98	20
SCAT-Y2	Tennis	41.00	7.71	10
	Table Tennis	44.20	7.94	10
	Total	42.60	7.79	20

Table 1, indicated the mean and SD of psychological factor of pre-competitive anxiety between tennis and table tennis players. The total mean and SD in pre-competitive anxiety sub-factors of cognitive anxiety, somatic anxiety, self-confidence, SCAT-Y1 & SCAT -Y2 between tennis and table tennis players are 21.15 ± 4.20 , 19.05 ± 2.91 , 27.65 ± 5.62 , 41.00 ± 6.98 , 42.60 ± 7.79 respectively.

The mean and SD in sub-factor of cognitive anxiety, somatic anxiety and self-confidence of male tennis and table tennis players are 21.50 ± 3.56 & 20.80 ± 4.94 ; 19.40 ± 2.59 & 18.70 ± 3.30 & 26.40 ± 4.19 & 28.90 ± 6.75 respectively. The mean and SD in sub-factor of SCAT- Y1 & SCAT- Y2 of male tennis and table tennis players are 43.40 ± 5.71 & 38.60 ± 7.57 ; 41.00 ± 7.71 & 44.20 ± 7.94 respectively.

The graphical representation of mean scores of the sub factors of pre-competitive anxiety is presented in figure 1.

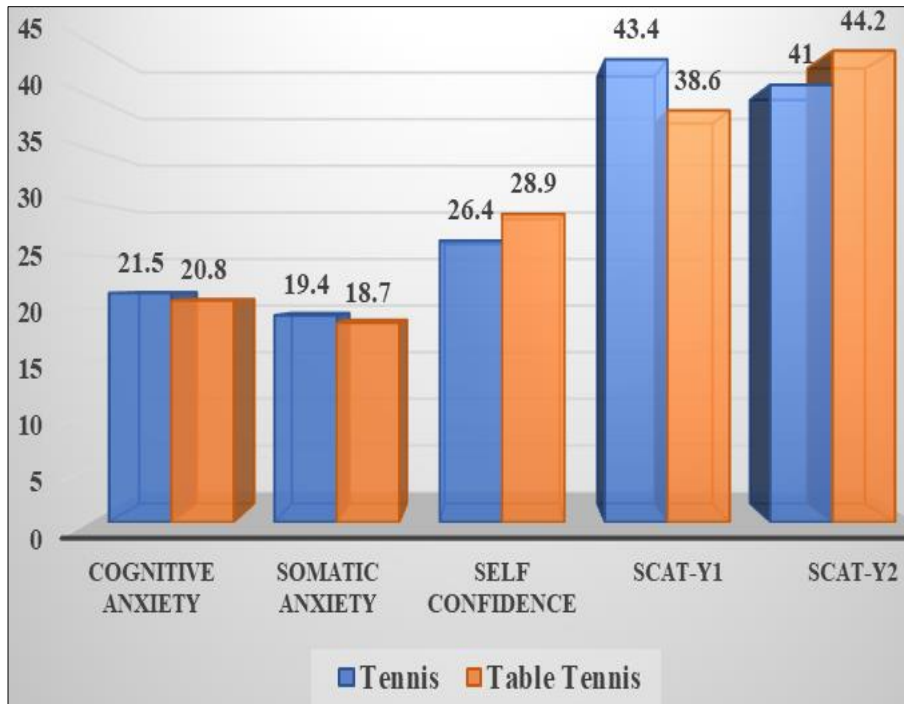


Fig 1: Means Scores of Pre-Competitive Anxiety Subfactors of Tennis & Table Tennis Sports Players

Table 2: Multivariate Analysis on Pre-Competitive Anxiety between Tennis and Table Tennis Players

	Value	F	Hypothesis df	Error df	Sig.
Pillai's trace	.327	1.360 ^a	5.000	14.000	.297
Wilks' lambda	.673	1.360 ^a	5.000	14.000	.297
Hotelling's trace	.486	1.360 ^a	5.000	14.000	.297
Roy's largest root	.486	1.360 ^a	5.000	14.000	.297

Each F tests the multivariate effect of Sports Group. These tests are based on the linearly independent pairwise comparisons among the estimated marginal means.

Table 2 represents multivariate analysis on pre-competitive anxiety between tennis and table tennis players. Though there are four multivariate tests, the value of Wilks' lambda was considered. The value of Wilks' lambda (0.673) was found to be insignificant at 0.05 level of significance (p= 0.297).

Since the multivariate analysis was found insignificant no further analysis was done. The insignificant value of Manova depicted that the sub factors of pre-competitive anxiety was at similar levels when compared between the male tennis and table tennis sports players.

Discussion of findings

The multivariate analysis was found to be insignificant in the sub factors of pre-competitive anxiety between tennis and table tennis players as the value of Wilks' lambda (0.673) was found to be insignificant at 0.05 level of significance (p= 0.297). The insignificant value of MANOVA depicted that the sub factors of pre-competitive anxiety was at similar levels when compared between the male tennis and table tennis sports players.

The findings of the present study were in consonance with the study conducted by Sil (2015) [7] comparing fear of competition between the 62 national-level male and female national level basketball players. It was concluded that there was no difference in in competitive anxiety nationally between male and female basketball players. As also in a study by Klavara (1975) [6] who attempted to study optimal

pre-competitive state anxiety of football players on 4 level of football competition: Junior High School, Senior High School, Alberta Junior and University. This study too revealed no significant differences in optimal pre-competitive state anxiety at the competitive levels as it was found out in this study. Though the literature directs towards the conclusion that anxiety varies when compared between various groups or condition, which was completely diverse with the findings of the study as because of the reason may be that in this present study the sample size selected was too less to generalize the fact that the anxiety level should be or not similar in the racket sports players of badminton and tennis. A reason for obtaining this kind of result was that the players in the institution from where the data was collected participate in various activities and play the sports interchangeably sometimes.

Conclusion

The conclusions drawn on the basis of obtained results on the psychological variables of pre-competitive anxiety was that the multivariate analysis was found to be insignificant in the sub factors of pre-competitive between tennis and table tennis players as the value of Wilks' lambda (0.673) was found to be insignificant at 0.05 level of significance (p= 0.297). The insignificant value of MANOVA depicted that the sub factors of pre-competitive anxiety was at similar levels when compared between the male tennis and table tennis sports players.

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