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A comparative analysis of anxiety in a precompetitive state between badminton and Tennis University levelled players

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Abstract

The primary purpose was to compare anxiety in a pre-competitive state of male badminton and 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 badminton and tennis sports practices. The subjects were selected from the study centre of Lakshmibai National Institute of Physical Education both Gwalior and Guwahati center. In order to measure the pre competitive anxiety level, questionnaires, namely, Illinois self-evaluation Inventory and Sports competition anxiety test (SCAT) were implemented on racket sports players and used as the tool 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 badminton and tennis players as the value of Wilks' lambda (0.818) was found to be insignificant at 0.05 level of significance ($p=0.686$). The insignificant value of MANOVA depicted that the sub factors of pre-competitive anxiety was at similar levels when compared between the male badminton and tennis sports players.

Keywords: Anxiety, pre- competitive state, descriptive statistics, multivariate analysis of variance

Introduction

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 pop 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 focusses 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 indirectly 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 is to shed light upon the anxiety level at the pre-competitive state as compared between the university level racket sports players of badminton and tennis sports practices.

Methods

Selection of Subjects

For this study a total of twenty (N=20) male university levelled 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 badminton and tennis sports players.

Selection of Variable

The variable selected for this comparison between badminton and tennis players was anxiety at a pre-competitive state, questionnaires were administered on racket sports players for data collection. Two questionnaires were administered on the subjects such as, Illinois self-evaluation Inventory and Sports competition anxiety test (SCAT).

Illinois Self-Evaluation Inventory

The CSAI-2 is an inventory designed to measure existing states of anxiety in a competitive situation based on three subfactors such as- Cognitive Anxiety, Somatic Anxiety, Self-Confidence. This scale was developed by Marten *et al* (1990) [8] and is called the Competitive State Anxiety Inventory-2 (CSAI-2).

Sports Competition Anxiety Test (SCAT)

The Sport Competition Anxiety Test (Martens, 1977) [9], commonly known as just the SCAT test, is a self-reporting questionnaire about anxiety. The SCAT analyses an athlete's responses to a series of statements in two forms (Y1 & Y2) about how they feel in a competitive situation. From the results it is possible to determine a measure of their level of anxiety.

Statistical Technique

In order to analyze the data collected, descriptive statistics

such as mean, standard deviation and comparative statistics to analyze the variable of 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., badminton (N=10) and tennis (N=10) respectively were investigated on the basis of the psychological variable of subfactors of anxiety at the pre competitive state. The descriptive statistics and the multivariate analysis have been presented in the following tables.

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

	Sports Groups	Mean	Std. Deviation	N
Cognitive anxiety	Badminton	20.30	5.73	10
	Tennis	21.50	3.56	10
	Total	20.90	4.68	20
Somatic anxiety	Badminton	18.40	4.42	10
	Tennis	19.40	2.59	10
	Total	18.90	3.56	20
Self confidence	Badminton	30.20	5.75	10
	Tennis	26.40	4.19	10
	Total	28.30	5.27	20
SCAT_Y1	Badminton	39.00	12.32	10
	Tennis	43.40	5.71	10
	Total	41.20	9.61	20
SCAT_Y2	Badminton	37.80	8.77	10
	Tennis	41.00	7.71	10
	Total	39.40	8.21	20

Table 1, indicated the mean and SD of psychological factor of anxiety in pre-competitive state between badminton and 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 badminton and tennis players are 20.90 ± 4.68 , 18.90 ± 3.56 , 28.30 ± 5.27 , 41.20 ± 9.61 , 39.40 ± 8.21 respectively. The mean and SD in sub-factor of cognitive anxiety of male badminton and tennis sports players are 20.30 ± 5.73 & 21.50 ± 3.56 respectively. The mean and SD in sub-factor of somatic anxiety of male badminton and tennis sports players are 18.40 ± 4.42 & 19.40 ± 2.59 respectively. The mean and SD in sub-factor of self-confidence of male badminton and tennis sports players are 30.20 ± 5.75 & 26.40 ± 4.19 respectively. The mean and SD in sub-factor of SCAT- Y1 and SCAT- Y2 of male badminton and tennis sports players are 39.00 ± 12.32 & 43.40 ± 5.71 & 37.80 ± 8.77 & 41.00 ± 7.71 respectively.

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

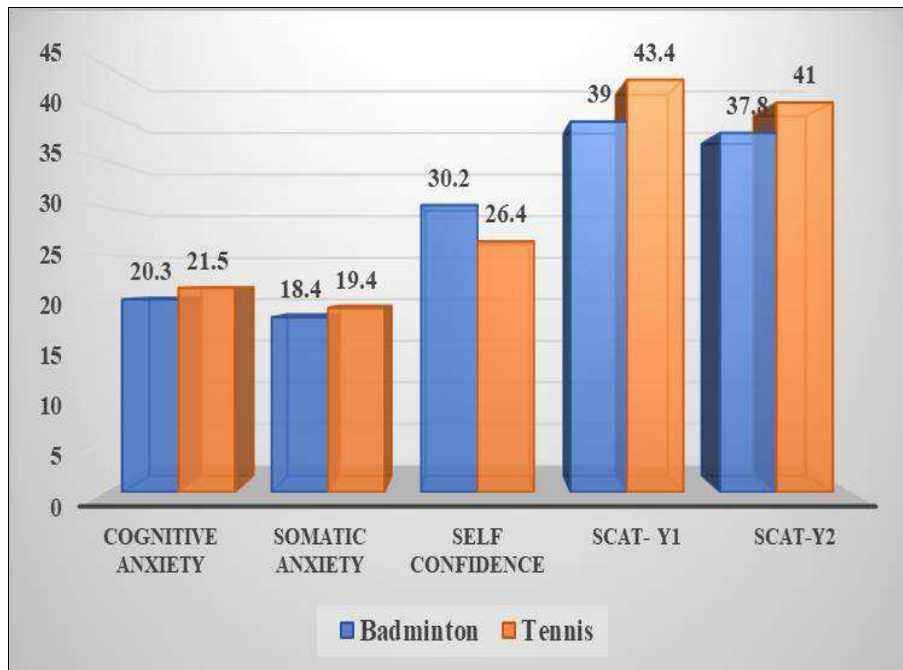


Fig 1: Means Scores of Subfactors of Anxiety at Pre-Competitive Stage of Badminton & Tennis Sports Players

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

	Value	F	Hypothesis df	Error df	Sig.
Pillai's trace	.182	.621 ^a	5.000	14.000	.686
Wilks' lambda	.818	.621 ^a	5.000	14.000	.686
Hotelling's trace	.222	.621 ^a	5.000	14.000	.686
Roy's largest root	.222	.621 ^a	5.000	14.000	.686

Each F tests the multivariate effect of Sports Groups. 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 badminton and tennis players. Though there are four multivariate tests, the value of Wilks' lambda was considered. The value of Wilks' lambda (0.818) was found to be insignificant at 0.05 level of significance ($p=0.686$).

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

Discussion of findings

The multivariate analysis was found to be insignificant in the sub factors of anxiety at pre-competitive state between badminton and tennis players as the value of Wilks' lambda (0.818) was found to be insignificant at 0.05 level of significance ($p=0.686$). The insignificant value of MANOVA depicted that the sub factors of anxiety at pre-competitive state was at similar levels when compared between the male badminton and 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 Klavora (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 anxiety at pre-competitive stage was that the multivariate analysis was found to be insignificant in the sub factors of anxiety at pre-competitive stage between badminton and tennis players as the value of Wilks' lambda (0.773) was found to be insignificant ($p=0.555$). The insignificant value of MANOVA revealed that the male badminton and tennis sports players was at similar levels when compared on the sub factors of anxiety at a pre-competitive state.

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