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## Impact of pre-competition anxiety on performance of university level female football players in different zone of India

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### Abstract

**Introduction:** Pre-competitive anxiety (PCA) is psychological state of athlete's mind that is not pleasant or may be negative and it starts from day prior to competition. These negative thoughts occur so frequently in response to stress of competition and can affect their on-field performance.

**Objective:** The aim of this study is to measure pre-competition anxiety (PCA) level in inter-university women football team of East and West zone of India.

**Methodology:** Study design: Present study was a cross-sectional study. Sample size: 51(East zone), 50 (West zone). Sex: Female. Number of teams: 3(East zone), 3 (West zone).

**Protocol:** After initially directly contacting athletes, provide SCAT questionnaire to them and asked to athlete complete it before start of competition and returned back to researcher. Score of questionnaire was calculated and teams were ranked according to their performance in the tournament. **Statistics:** Data were analyzed using IBM SPSS v21.0 software. Pearson coefficient of correlation test was used to measure the correlation between PCA and performance.

**Results:** All teams had moderate level of anxiety (SCAT score lies in range from 13 to 27). There was a weak negative correlation between PCA and performance ( $p < 0.01$ ).

**Conclusion:** The present study supports that as the PCA level decreases the performance increases amongst national level inter-university football teams. However the relationship was weak.

**Keywords:** SCAT, gender, PCA, football, players.

### 1. Introduction

Pre-competitive anxiety (PCA) is psychological state of athlete's mind that is not pleasant or may be negative and it starts from day prior to competition. There are many modifiable psychological risk factors that are responsible for developing mental stress to athlete which have negative impact on performance of athlete (Esfahani & Soflu., 2010) [1]. Past practice research concluded that PCA act as a most important psychological factor before and during the competition. Competitive anxiety is a type of anxiety created in competitive situations that affects the performance of athletes and the higher the level of this anxiety, the lower will be the performance of athletes [2]. Others factor includes that can develop pre competition anxiety are success of game, athlete's abilities and capabilities required for sports, performance experience, catastrophic and previous problems, fear from failure, loss of concentration & attention, unhappiness, guilt, discouragement, and focus distraction and all these factors have a negative impact on competition performance (Hackfort & Spielberger, 1989; Martens, Vealey, & Burton, 1990; Hall HK 1998; Cerin, 2003; Kais & Raudsepp, 2005) [3-7]. An athlete's require strong mental makeup, accurate gross & fine motor skills, positive behavior and powerful physical buildup for success and increase the performance rate in competition but if they are lacking in these determining factors, can have degradation in performance [2, 8, 9]. In fact, all these factors play a decisive role in a competition. Some researcher done studies on gender differences concentrating anxiety state levels and demonstrated that male athlete have low level of anxiety than females but none found significant difference among different sex [10-16]. However, Hanton *et al.*, (2008) noted that athletes perform best when they are at the preferred anxiety level and how athletes interpret the anxiety situation; either anxiety can be facilitative or debilitating to performance [17].

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### 1.1 Objective of study

The aim of this study is to measure pre-competition anxiety (PCA) level in inter-university women football team of different zone of India.

## 2 Methodology

**2.1. Study design:** Present study was a cross-sectional study.

**2.2. Sample size:** 101 [51 subjects from universities of East zone; 50 subjects from universities of West zone] subjects recruited from female football players participating in all India inter-university level tournament held at Guru Jambheshwar university of science & technology. Numbers of teams participating in tournament from above said zones were 6 [(Pune University, Banasthali University and Goa University from west zone), (B.R.A, Bihar University, Ranchi University, Manipur University, East zone)].

**2.3. Protocol:** First of all, we contacted sports authority coordinators or coaches to arrange a date and location to administer the questionnaire. Before completion of SCAT questionnaire, whole procedure of study was explained to each subject so they faced no difficulty in filling the form. Subjects have to complete the form 2 hours before the start of competition. All athletes were informed of the confidentiality of data and voluntarily participated in the investigation. No important incidents occurred during administration of the questionnaire, and athletes were able to continue with their usual practice routines after they finished responding. For the present study, the data were collected according to the

Sports Competition Anxiety Test (SCAT) developed by Martens *et al.* (1990) to measure pre competition anxiety from all subjects. This test consisted of 15 items to be answered by the players. The teams were ranked according to their performance in the tournament (1 to 6). SCAT is trait anxiety inventory designed to measure a predisposition to response with varying degrees of anxiety in competitive sports situations. SCAT has 10 anxiety items and 5 filter statements and each item is rated on a Likert scale from 1 to 3 (1= Hardly Ever, 2=sometimes and 3= Often). SCAT is a 15-item inventory with scores ranging from 10 (low) to 30 (high) [Less than 17 You have a low level of anxiety; 17 to 24 You have an average level of anxiety; More than 24 You have a high level of anxiety]. The test-retest reliability and internal consistency (Cronbach alpha) of SCAT were .90 and .79, respectively (Koruç *et al.* 2000 in press).

**2.4. Statistics:** Data were analyzed using IBM SPSS v21.0 software.

## 4. Results

The scores were obtained and calculated by using the answer key as described by Martens *et al.* 1990. All the individual SCAT Score was used to judge the level of anxiety and results in moderate level of anxiety (SCAT score lies between 13 and 27). All teams of west zone have average level of anxiety score (19.93  $\pm$  .778) and teams of east zone have also average level of anxiety (18.68  $\pm$  1.38).

**Table 1:** Descriptive statistics team SCAT score (individual n=101; team n=6)

S. No	Team Code (n)	Zone	SCAT (Mean $\pm$ SD)	Low Score	High Score
1	Team 7 (16)	East	20.06 $\pm$ 1.98	17	25
2	Team 8 (16)	East	18.69 $\pm$ 1.66	16	21
3	Team 9 (18)	East	17.30 $\pm$ 1.34	15	20
4	Team 10 (17)	West	19.53 $\pm$ 4.26	13	25
5	Team 11 (16)	West	19.44 $\pm$ 2.42	16	25
6	Team 12 (18)	West	20.83 $\pm$ 4.31	14	27
	Grand Total		19.31 $\pm$ 1.21	15.16	23.83

## 6. Discussion

Purpose of this study was to see the relation between performance and PCA level in elite inter-university women football teams. Result of this study indicates that there was a moderate negative correlation between PCA and performance. PCA is one of the several psychological factors that are believed to have a significant effect on athletic performance [17-21]

Mean SCAT score found in this study is similar to Indian college level volleyball players; [22] Indian university level field hockey players; [23, 24] Indian college level and academy level cricketers [25, 26]

Parnabas *et al.* found a moderate-to-high negative correlation in team sports like football [27], handball [28], basketball [29] and field-hockey [30] at university level. Our results also presents that there is a moderate negative correlation between performance and PCA. The importance of this study is the association is within moderate level of anxiety in all teams. Literature shows that both low as well as high anxiety will decrease the performance [9-18].

Ethiopian male football players were at the average level of competitive anxiety and this could be one of the possible impacts on the performance of Ethiopian male football players [11].

Future research should identify the most prevalent sources of

competition anxiety among different skill of football athletes. Initial evidence suggest among the sources of anxiety are fear of injury, presence of audience, past unpleasant experiences, fear of lose, negative evaluation, knowledge of the opposition team, uncertainty, playing at the opposition's place, high hope, and perceived sport events as very important. Seeking sources of cognitive anxiety should be a great value to reduce the level of anxiety. Furthermore, types of coping strategies can be used to reduce the level of cognitive anxiety among athletes much depend on the sources of anxiety.

## 7. Conclusion

The present study supports that as the PCA level decreases the performance increases amongst national level inter-university football teams. However the relationship was weak.

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