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**Dr. Kuntal Thakur**

Assistant Professor, Khejuri  
College, Purba Medinipur, West  
Bengal, India

## A study on pre-competitive and post-competitive anxiety and stress of national level yoga performers

**Dr. Kuntal Thakur**

### Abstract

The purpose of the present study was to find out the difference between pre-competitive anxiety and stress and post-competitive anxiety and stress in national level male and female yoga performers. Total sixty (N=60) national level yogic practitioners i.e. thirty male performers (Gr. M) and thirty female performers (Gr. F) were randomly selected from National level School Yogasanas Competition, held at Delhi, 2016. Data were collected from performers using a Sports Competitive Anxiety Test (SCAT) consists of fifteen items which include 5 spurious items, 8 positive items and 2 negative items. Stress Questionnaire designed by The International Stress Management Association (ISMAUK) and it was employed to all the performers of Gr. M and Gr. F.

The t-test was used to compare the mean of the anxiety and stress level between pre and post competition. The level significance was set at  $p < 0.05$ . The result of the study reveals that:- i) Pre-competitive anxiety and stress of national level for both male and female yogic performers was higher than post competitive anxiety and stress levels. ii) Significant improvement was observed between pre and post competitive anxiety and stress of both national level male and female yogic performers. iii) Female yogic performers were significantly higher level of anxiety and stress than male yogic performers.

**Keywords:** Anxiety, stress, yogasana

### Introduction

Psychological set up of the sportsman takes a leading role on top level performance in any competitions. Psychological factors determine the competitive behaviour, mental processes and preparation before competition. Sports psychology is a specialized area of psychology that seeks to understand the mental factors that affect individual and team performance in sports. In other word sport psychology is the scientific study of the behaviours of sport persons. It deals with increasing performance by managing emotions and minimizing the psychological factors that causes injury and deteriorate performance. Some of the most important skills taught are goal setting, relaxation, visualization, self-talk, awareness and control, concentration, using rituals, attribution training, and per iodization. It has been recognized for many years that psychological factors, in particular anxiety and stress, play an important role in competition (Lizuka, C.A *et al.*, 2005) [14]. Martens (1973) developed the sports competition Anxiety Test (SCAT) in order to provide a reliable and valid instrument which is a situation specific anxiety trait (A-trait) construct to measure competitive trait anxiety. He described competitive trait anxiety as “a tendency to perceive competitive situation with feeling of apprehension or tension.” while state anxiety on the other hand, an actual feeling of tension and nervousness. Whereas trait anxiety is a relative stable personality characteristic, state anxiety is considered to be a transitory emotional state. A certain amount of anxiety is needed for peak performance. Our body’s autonomous nervous system prepares for competition with the “fight and flight” response which quick reaction time, sharpens our senses and increases our strength. But excessive anxiety, however, is debilitating to performance. Competitive trait anxiety is a concept, which denotes how anxious an individual typical becomes in competitive situations. It reflects an individual’s tendency to perceive competitive situations as threatening (Martens, 1977). Singh M. P *et al.* (2009)

**Correspondence**

**Dr. Kuntal Thakur**

Assistant Professor, Khejuri  
College, Purba Medinipur, West  
Bengal, India

studied on social ability between IIT Gandhi agar engineering students and VGEC Ahmedabad engineering students and results showed that the both institutes confronts to the same level of academic stress which requires almost similar level of attention towards the academics.

In sport psychology, anxiety refers to an unpleasant emotion which is characterized by vague but persistent feelings of apprehension and dread (E. Cashmore, 2002) [11]. Pre-competitive anxiety has been defined as the tendency to perceive pre-competitive situation as threatening and to respond to these situation with feeling of apprehension or tension. Anxiety consists of two subcomponents, namely cognitive and somatic anxiety, which influence performance before and during competition (Weinberg and Gould, 1999; Lazarus, 1991; Anshel, 2003; Martens *et al.*, 1990; Jarvis, 2002) [17, 10, 19, 22, 13]. Meanwhile, cognitive is the mental component, which is characterized by negative expectations about success or self-evaluation, negative self-talk, worry about performance, images of failure, inability to concentrate, and disrupted attention (Martens *et al.*, 1990; Jarvis, 2002) [19, 22, 13]. The somatic is the physiological element which is related to autonomic arousals, and negative symptoms such as feelings of nervousness, high blood pressure, dry throat, muscular tension, rapid heart rate, sweaty palms, and butterflies in the stomach (Martens *et al.*, 1990; Jarvis, 2002) [19, 22, 13]. One approach is that increases in competition anxiety, and particularly cognitive symptoms, always have a detrimental effect on performance. At the same time as providing challenge and stimulation, sport also provides considerable uncertainty. At the precise moment the Olympic archer releases an arrow, or the rugby fly-half kicks for goal, the outcome is unknown.

Thus, anxiety is one of the most commonly measured parameter in sports psychology. Anxiety can be considered the emotional impact or cognitive dimension of arousal. Anxiety has been viewed as feeling of nervousness and tension associated with activation or arousal of the organism. Anticipatory or imaginative process causes it. Competitive sport can make even the world's most successful athlete feel nervous. Many factors such as expectations, perfectionism, fear of failure, lack of confidence, induce feelings of anxiety in athletes (Moran, 2004) [23]. In modern time, school yogasanas competition is one of the most popular competitions in India. Yogasanas is a part of physical education. It is well known that yoga reduces stress, anxiety and aggression. But in the time of competition these psychological components may increase and affected performance. Now the question is that can anxiety be controlled through yoga at the time of competition? Thus, investigators intended to find out the state of pre-competitive and post-competitive anxiety among male and female yogic performers. The purpose of this study was to examine the pre and post competitive anxiety in national level yogic practitioners. Investigators also intended to compare between male and female yogic practitioners in sports competitive anxiety state.

### Methodology

**Sample:** Total sixty (N=60) national level yogic practitioners i.e. thirty male performers (Gr. M) and thirty female performers (Gr. F) were randomly selected from National level School Yogasanas Competition, held at Delhi, 2016. They came in different state in India. Age limit of the subjects was from 17 years to 19 years.

**Procedures:** The **SCAT (Martens, 1977) inventory and Stress questionnaire** were administered to all the subjects of both groups before each competition. The data was collected 60 minutes before start of each competition after asking them to sit for 3 minutes to cool down and the post competitive test was conducted to collected data on 30 minutes after finish of competition after asking them to sit for 3 minutes cool down.

### Tools

Sports Competitive Anxiety Test was developed by Rainar Martens (1977). This test consists of 15 items which include 5 spurious items, 8 positive items and 2 negative items. The SCAT reliability ranged 0.57 to 0.93 with mean of 0.77 for all the samples combined. The validity of this test reported by various researchers is satisfactorily high.

Stress Questionnaire designed by The International Stress Management Association (ISMAUK). Total twenty-five statements are there and answer all the questions with either a Yes or a No. Answer yes, even if only part of a question applies to you. Scoring will be one or zero for each answer. Following guideline for this questionnaire is given below.

- i. **4 points or less:** You are least likely to suffer from stress-related illness.
- ii. **5-13 points:** You are more likely to experience stress related ill health either mental, physical or both. You would benefit from stress management / counselling or advice to help in the identified areas.
- iii. **14 points or more:** You are the most prone to stress showing a great many traits or characteristics that are creating un-healthy behaviours. This means that you are also more likely to experience stress & stress-related illness e.g. diabetes, irritable bowel, migraine, back and neck pain, high blood pressure, heart disease/strokes, mental ill health (depression, anxiety & stress). It is important to seek professional help or stress management counselling. Consult your medical practitioner.

**Statistics:** In the present study for the sake of analysis of data; mean and standard deviation of the raw scores of anxiety and stress were calculated separately for pre & post competition for both groups and statistical t-test was used to compare the mean. The level of significance was set at  $p < 0.001$  level of confidence. For statistical calculations Excel Spread Sheet of windows version 7 was used.

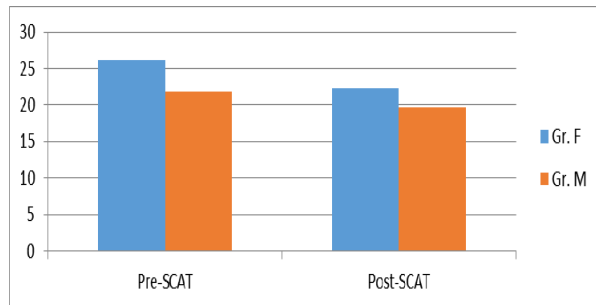
### Results and Discussion

Table 1, indicates the mean values standard deviation and t-value of Pre competitive and Post competitive anxiety score of national level male and female yogic performers. The mean value of female subjects in Pre competition and Post competition were 25.61 and 21.37 respectively and the t-value between pre and post competition of the female yogic practitioners was 3.57 which were significant at 0.05 level of confidence. The mean values of Pre competitive and Post competitive anxiety score of national level male yogic performers were 21.7 and 19.12 respectively. The t-value was 3.18 which were significant at 0.05 level of confidence. Thus it indicated that there had a significant difference between anxiety scores of Pre competitive and Post competition situation of both national level female and male yogic practitioners.

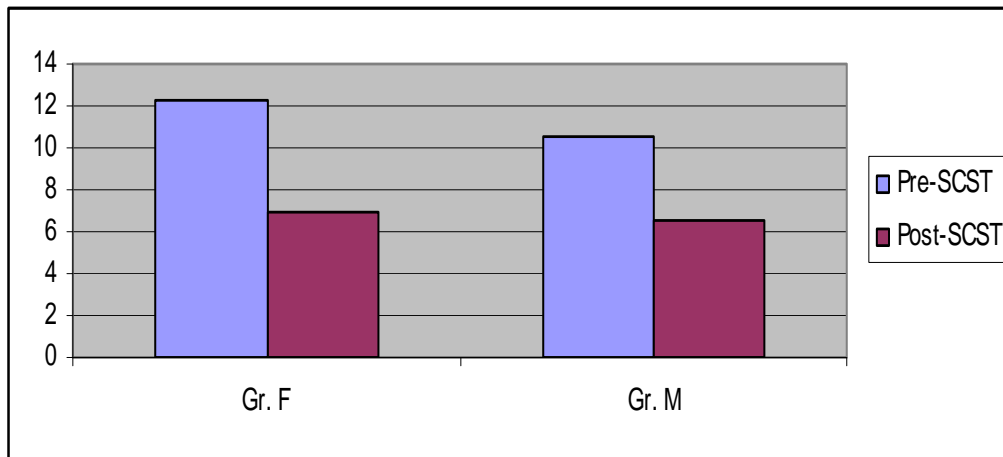
**Table 1:** Mean, SD, t-value of Pre-competitive and Post-competitive Anxiety of National Level Female and Male Yogic Practitioners

Type of Test	Gr. F			Gr. M		
	Mean	SD	t	Mean	SD	t
Pre-SCAT	25.61	1.23	3.57	21.7	1.85	3.18
Post-SCAT	21.37	1.33		19.12	1.51	

Significant at .05 level of confidence



**Fig 1:** Comparison of means of Pre & Post SCAT among Gr. F and Gr. M



**Fig 2:** Comparison of means of Pre & Post SCST among Gr. F and Gr. M

**Fig.1&2;** showed that the post performance competitive anxiety and stress of female yogic performers had improved significantly from the pre competitive situation. On the other hand, the post competitive anxiety and stress of male yogic performers had also improved significantly from pre competitive anxiety and stress. For both of the groups, pre competitive anxiety and stress were higher than post competitive anxiety and stress. Findings of present study supported by Sprange (1981) compared competitive trait anxiety levels of participants in title league and neighbourhood baseball. He found that there was significant difference in the Pre competitive and Post competitive anxiety of national baseball players. Boutin (1983) examined the level and performances in NAIA inter-college basketball games. The subjects included 5 teams and 53 players. The study revealed that the pre competitive level of anxiety in inter-college basketball players was high and post competitive anxiety in inter-college basketball players was low. The findings supported by Evans (1983) [12] he examined the acute response of female basketball players and anxiety to

**Table-II,** indicates the mean values, standard deviation and t-value of Pre competitive and Post competitive stress score of national level female and male yogic performers. The mean value of female subjects in Pre competition and Post competition were 12.26 and 6.93 respectively and the t-value between pre and post competition of the female yogic practitioners was 4.35 which were significant at 0.05 level of confidence. The mean values of Pre competitive and Post competitive anxiety score of national level male yogic performers were 10.5 and 6.55 respectively. The t-value was 4.72 which were significant at 0.05 level of confidence. Thus it indicated that there had a significant difference between anxiety scores of Pre competitive and Post competition situation of both national level male and female yogic practitioners.

**Table 2:** Mean, SD, t-value of Pre-competitive and Post-competitive Stress of National Level Female and Male Yogic Practitioners

Type of Test	Gr. F			Gr. M		
	Mean	SD	t	Mean	SD	t
Pre-SCST	12.26	1.47	4.35	10.5	2.12	4.72
Post-SCST	6.93	1.10		6.55	1.25	

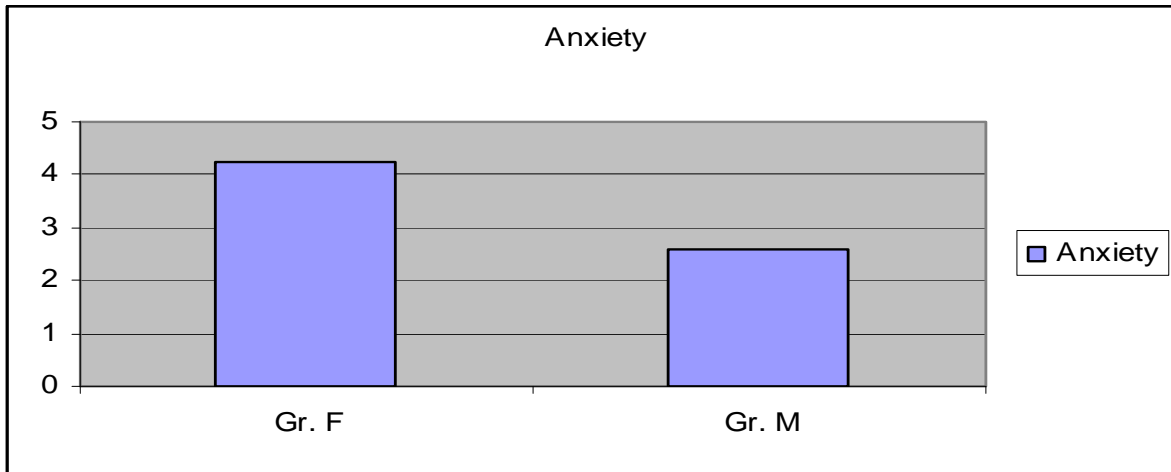
Significant at .05 level of confidence

competitions. The results of the study were that Pre competitive level of anxiety in inter college basketball female players was high and Post competitive anxiety in inter college basketball female player was low. In male inter college volleyball players the pre competitive level of anxiety was higher than Post competitive anxiety and findings supported by Singh (1986) [26] he examined pre test and post test anxiety and found out that the pre competitive level of anxiety in inter college male athletic players is high and Post competitive anxiety in inter college male athletic player is low.

**Table 3:** Comparison of mean difference of pre and post competitive anxiety among Gr. F and Gr. M

Grouped Compared	Anxiety		
	Mean	SD	t
Gr. F	4.24	0.73	4.13
Gr. M	2.58	0.56	

Significant at .05 level of confidence



**Fig 3:** Comparison of mean difference of Pre & Post SCAT among Gr. F and Gr. M

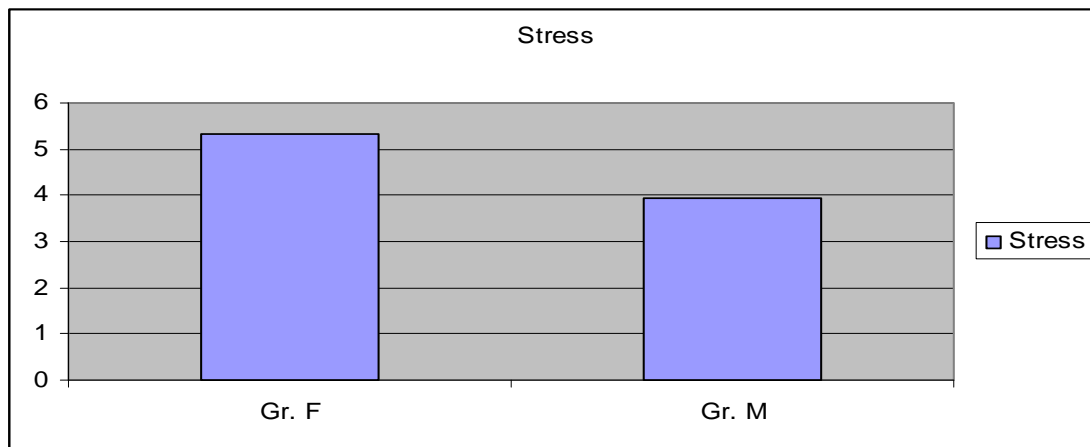
**Fig. 3,** represents the mean value of the mean difference of competitive anxiety between pre and post performance of two groups. From the findings of the present study, it can be stated that male yoga performers group was better competitive anxiety level than female yoga performers. This finding is in agreement with others. According to Montgomery and Morris (1994) [20] and Lewinsohn, Gotlib, Lewinsohn, Seeley and Allen (1998) [15], female athletes generally exhibit higher anxiety than males because of the mental structure and biological factors and their roles in the society. For example,

the society can accept if females show fear, nervousness, and worry but not the males (Montgomery and Morris, 1994) [20].

**Table 4:** Comparison of mean difference of pre and post competitive Stress among Gr. F and Gr. M

Grouped Compared	Stress		
	Mean	SD	t
Gr. F	5.33	1.07	6.88
Gr. M	3.95	0.88	

Significant at .05 level of confidence



**Fig 4:** Comparison of mean difference of Pre & Post Stress among Gr. F and Gr. M

Fig. 4, represents the mean value of the mean difference of competitive stress between pre and post performance of two groups. From the findings of the present study, it can be stated that male yoga performers group was better competitive stress level than female yoga performers.

On the other hand, pre competitive level of stress in female and male national level yoga performers were higher than post competitive stress and the findings are in supportive of previous reports. Yoga reduces stress but in time of competition these psychological components may be increase. So investigators intended to find out the state of pre-competitive and post-competitive anxiety among male and female yogic performers and results also revealed that the national level male yogic performers were low anxiety than national level female yogic performers. Anxiety is one of the most commonly measured construct in sports psychology.

Anxiety can be considered the emotional impact or cognitive dimension of arousal. Anxiety has been viewed as feeling of nervousness and tension associated with activation or arousal of the organism. Anticipatory or imaginative process causes it. Competitive sport can make even the world’s most successful athlete feel nervous. Many factors such as expectations, perfectionism, fear of failure, lack of confidence, induce feelings of anxiety in athletes (Moran, 2004) [23].

**Conclusion**

Within the limitations of the present study, the following conclusions are enumerated.

1. Pre-competitive anxiety of national level for both female and male yogic performers was higher than post competitive anxiety levels.

2. Significant improvement was observed between pre and post competitive stress of both national level female and male yogic performers.
3. Female yogic performers were significantly higher level of anxiety than male yogic performers.
4. Male yogic performers were significantly lower level of stress than female yogic performers.

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