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## Anxiety level of sportsmen of individual and team games: A comparative study

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### Abstract

During the present study anxiety levels among various sportsmen were compared. For the present study 60 players under 25 years were taken for the study purpose. The athletes considered for the study were from different sports background viz Softball (15 players) and Handball (15 players) and two individual games, namely Swimming (15 players) and Cyclists (15 players) for the collection of the primary data. The results revealed that softball athletes were more prone to anxiety as compared to handball, swimming and cyclists' sportsmen.

**Keywords:** Anxiety, performance, swimming, cycling, handball and softball

### Introduction

“Competition” is a social process that takes place when players are compared from one another on the basis of performance (Coakley, 1994) [20]. Anxiety is unease in athletes that leads to fear of performance. In sports pre-competitive anxiety leads to fear and worrisome among athletes related to the performance (Jervis, 2002). Many scholars upon analysis have concluded that anxiety affects athlete's performance. Though anxiety can add performance but should not cross threshold level that lower the performance. Scholars have revealed that inexperienced athletes are more prone to anxiety than experienced athletes. Some other researchers have also shown that skilled athletes are less anxious immediately before and during competition than athletes of lower skill. Tutko (1971) [22] has supported inverted “U” hypothesis which is to measure the level of anxiety among the athletes. Inverted U hypothesis states that players perform better in moderate anxiety. Burton (1988) [23] has revealed that performance is based on the level of anxiety. During high or low level of anxiety performance is affected. Anxiety has been defined in a variety of ways, such as “A disturbed state of the body”; “Emotional reactivity”; “Unrealistic and unpleasant state of body and mind”; “Nervousness”. In medical terminology, anxiety is defined as “apprehension of danger accompanied by restlessness and a family of oppression in the epigastrium”. Certain reactions such as rapid breathing, dizziness, increased heart beat and excess sweating are the signs of the anxiety.

Anxiety has been reported to be higher in high competitions rather than low level competitions. It is therefore important to have positive thinking for the better performance. A number of researchers have reported that anxiety beyond level affects the game (Martens, et. al. 1990). Singer (1980) have examined the relationship between the level of performance with anxiety. Different results have been reported by different authors related to the relationship between the level of anxiety with the performance. Significant difference during high, moderate or low level of anxiety has not been reported. Therefore, considering this every sports person has its own anxiety level in which he performs better. Considering this the present study was undertaken to find out the levels of anxiety among different sportsmen in different games. The results of the study will generate the basic information related to the anxiety levels of sportsperson in different games. The results of the study will also help the coaches to reduce the level of anxiety among players in order to improve the performance. Following are the objectives of the present study.

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1. To study the level of anxiety with relation to individual and group game.
2. To relate the pre-competitive anxiety level between Handball players and Swimmers.
3. To relate the anxiety level between Handball players and Cyclists.
4. To study the anxiety level between Softball players and Swimmers.
5. Relationship between the anxiety level between Softball players and Cyclists.
6. Pre-competitive anxiety comparison level between Handball players and Softball players.
7. To compare the pre-competitive anxiety level between Swimmers and Cyclists.

**Materials and Methods**

The purpose of the present study was to analyze the level of anxiety among different athletes from various sports background. Overall sample size of 60 players under 25 years age-group were analyzed. Team game and individual game players were considered for the study. For team game viz. Softball (15 players) and Handball (15 players) and individual games, viz Swimming (15 players) and Cyclists (15 players) were considered for the study. The investigator used the Sports Competition Anxiety Test (adult form) of Rainer Martens (1977) [15] to measure pre- competition anxiety level. This test consists of 15 statements which ask players to respond how usually they feel when they are competing in sports and games. The inventory has no time- limit, normally, 5 minutes is required for its completion. Primary data was collected 1 hour before the competition.

Then necessary instructions were given before presenting the questionnaire to subjects. Same procedure was followed every time. The schedule of competition is as follows:

**Schedule**

**Inter- College Competition**

| Games    | Date                 |
|----------|----------------------|
| Swimming | 03.9.16 to 05.9.16   |
| Cycling  | 05.10.16 to 06.10.16 |
| Handball | 06.10.16 to 10.10.16 |
| Softball | 30.10.16 to 31.10.16 |

The study was conducted between September 2016 to October 2016. Inter-college competition includes Swimming, cycling, Handball and Softball.

**SCAT – A Norms**

| Scores       | Grouping         |
|--------------|------------------|
| 25 – 30      | Highly Anxious   |
| 18 – 24      | Above Average    |
| 12 -17       | Average          |
| Less Than 12 | Less than Normal |

**Statistical Techniques Used:**

From the above study Competition Anxiety Test (CAT) was performed among the different individuals of the athletes (swimming, cycling, handball and softball).

The obtained data was analyzed by applying the statistical techniques mean, standard deviation and t-ratio.

**Results and Discussion**

**Table 1:** Highlight of the Level of Anxiety of the Players of different Individual and Team Games

| Name of games | mean anxiety | SD   |
|---------------|--------------|------|
| Swimming      | 17.33        | 2.41 |
| Cycling       | 18.60        | 3.18 |
| Handball      | 16.87        | 2.28 |
| Softball      | 19.27        | 3.02 |

Table 1 results revealed that mean pre-competition anxiety score of Swimming (individual event) was 17.33 and SD was 2.41 which generally shows the anxiety level is average in swimmers of individual games. Mean score of cycling (individual event) was 18.60 with SD 3.18. In general, players of this individual event have little above to average anxiety level. In case of Handball (team games) mean score of anxiety 16.87 with the SD of 2.28, which again shows that level of anxiety is average. Mean anxiety of Softball (team games) was 19.27 with SD of 3.02; which shows that these players have above average anxiety level.

Simon & Martens, (1979) [25] have also found in their studies that athletes in individual sports are more prone to anxiety as compared to team sports.

In general, it can be concluded that players of Cycling and Softball have above average anxiety level and the players of Swimming and Handball have average anxiety level. But, the mean value of anxiety level in the case of Softball and Cycling is very little above average.

**Table 2:** Means, SD and t-ratio between Handball Players and Swimming Players

| Games    | Mean  | SD   | NO | SE <sub>D</sub> | t-ratio |
|----------|-------|------|----|-----------------|---------|
| Swimming | 17.33 | 2.41 | 15 |                 |         |
|          |       |      |    | 0.856           | 0.521   |
| Handball | 16.87 | 2.28 | 15 |                 |         |

Table 2 results revealed that mean scores of swimming (individual event) and Handball (team game) players were found to be 17.33 and 16.87 respectively with standard deviations of 2.41 and 2.28. The SE<sub>D</sub> and t-ratio for the Swimming and Handball players come out to be 0.856 and

0.521 respectively. Considering the results of the studies it was reported that the present results were not statistically significant. Rastogi and Katiyar, (2014) in their studies found no significant differences between the athletes of different games (Chess and Cricket) upon competition anxiety test.

**Table 3:** Means; SD and t-ratio between Handball Players and Cycling Players.

| Games    | Mean  | SD   | NO. | SE <sub>D</sub> | t-ratio |
|----------|-------|------|-----|-----------------|---------|
| Handball | 16.87 | 2.28 | 15  |                 |         |
|          |       |      |     | 1.009           | 1.72    |
| Cycling  | 18.60 | 3.18 | 15  |                 |         |

Table 3 results depicts that mean scores of Handball (team game) and Cycling (individual games) were 16.87 and 18.60 with standard deviations of 2.28 and 3.18 respectively. The SE<sub>D</sub> and t-ratio come out to be 1.009 and 1.72 respectively.

Statistical T analysis revealed that t-ratio is less than the table value against 0.98 degree therefore the difference between mean scores was not significant. Dubey, S. *et al.* (2015) [26] while performing a study on athletes on the basis of competition-based anxiety found no significant differences among the individuals of different players. Similar type of results were also observed by Khan, N. *et al.* (2015)

**Table 4:** Means; SD and t-ratio between Softball Players and Cycling Players

| Games    | Mean  | SD   | NO. | SE <sub>D</sub> | t-ratio |
|----------|-------|------|-----|-----------------|---------|
| Cycling  | 18.60 | 3.18 | 15  |                 |         |
|          |       |      |     | 1.33            | 0.59    |
| Softball | 19.27 | 3.02 | 15  |                 |         |

From the Table-4, it can be seen that the mean scores of Cycling (individual game) and Softball (team game) players are 18.60 and 19.27 with standard deviations of 3.18 and 3.02 respectively. It has SE<sub>D</sub> of 1.33 and t-ratio come out to be 0.59 respectively.

Again, the t-ratio was reported to be less than the table and the differences were found non significant between athletes of Cycling and Softball.

Hence, no significant difference between mean scores of Softball players and Cycling players in respect of pre-competition anxiety level is retained.

**Table 5:** Means; SD and t-ratio between Softball Players and Swimming Players.

| Games    | Mean  | SD   | NO. | SE <sub>D</sub> | t-ratio |
|----------|-------|------|-----|-----------------|---------|
| Softball | 19.27 | 3.02 | 15  |                 |         |
|          |       |      |     | 0.998           | 1.94    |
| Swimming | 17.33 | 2.41 | 15  |                 |         |

Table 5 results revealed the mean scores of pre- competitions of Softball (team game) and Swimming (individual game) players came out to be 19.27 and 17.33 with standard deviations of 3.02 and 2.41 respectively. The SE<sub>D</sub> and t-value come out to be 0.998 and 1.94 respectively. T-ratio was found to be 0.05 at level of significance, thus mean differences of anxiety levels among the athletes were found to be non significant. So the results does not exist a significant difference between Softball players and Swimming players in respect of pre-competition anxiety level is retained.

**Table 6:** Means; SD and t-ratio between Handball Players and Softball Players

| Games    | Mean  | SD   | NO. | SE <sub>D</sub> | t-ratio |
|----------|-------|------|-----|-----------------|---------|
| Handball | 16.87 | 2.28 | 15  |                 |         |
|          |       |      |     | 0.97            | 2.47    |
| Softball | 19.27 | 3.02 | 15  |                 |         |

Table 6 results confirmed that the mean scores of pre-competition anxiety of Handball (team game) and Softball (team game) players are 16.87 and 19.27 with standard deviations of 2.28 and 3.02 respectively.

The t-ratio for Handball and Softball players comes out to be 2.47. Since t-value is more than the table value at 0.5 level of significance. The difference between the mean scores is significant. No significant differences exists between mean scores of Handball and Softball players in respect of pre-competition anxiety level is rejected.

**Table 7:** Means; SD and t-ratio between Swimming Players and Cycling Players.

| Games    | Mean  | SD   | NO. | SE <sub>D</sub> | t-ratio |
|----------|-------|------|-----|-----------------|---------|
| Cycling  | 18.60 | 3.18 | 15  |                 |         |
|          |       |      |     | 1.03            | 1.23    |
| Swimming | 17.33 | 2.41 | 15  |                 |         |

It can be seen from the Table-7 that mean scores of Cycling (individual game) and Swimming (individual game) players are 18.60 and 17.33 with standard deviations of 3.18 and 2.41 respectively. The SE<sub>D</sub> and t-ratio come out to be 1.03 and 1.23 respectively. Similar type of results were also observed by Khan, N. *et al.* (2015)

Again t-ratio was recorded to be non significant. Hence, the hypothesis that there does not exist a significant difference between mean scores of Cycling and Swimming players in respect of pre-competition anxiety level is retained.

### Findings

1. Present results reported that the players of different individual and team games do not differ in pre-competition anxiety level.
2. Players of softball were found to be more prone to anxiety as compared to other sportsmen.
3. Handball and Cycling players do not differ significantly in pre-competition anxiety level.
4. No significant difference was reported in the pre-competition anxiety level between Softball and Swimming players.
5. Softball players and Cycling players do not differ significantly in pre-competition anxiety level.
6. Handball and Softball players differ significantly in pre-competition anxiety level.
7. Cycling players and Swimmers of individual games also do not differ significantly in pre-competition anxiety level.

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