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A study of competitive anxiety of elite compound archers of India

[1] Anjali, [2] Aryavart Dabas
[1] Assistant Professor, College of Vocational Studies, Delhi University, Delhi, India
[2] Physical Education Teacher, Delhi, India

Abstract
The study was intended to find out the competitive anxiety of elite compound archers of India. For the purpose of the study, top eight elite Indian Archers of compound Division were selected (Men and Women) from National Ranking Archery Tournament (NRAT). The age of the subjects were ranging from 17-35 years with mean 22.63. In order to fulfil the objective of study sports Competition Anxiety Test (SCAT) questionnaire was used. The present study towards sports competition anxiety is quite thought provoking and noteworthy. The SCAT assesses sports competition anxiety before competition. This measurer consists of 15 items that are rated on a three-point scale. A score is computed by summing ten of 15 the items, with higher scores indicating higher levels of anxiety concerning the upcoming competition. The SCAT has also been extensively used in sports research and shown to be both reliable and valid. The statistical technique "t" test was employed in order to achieve the objective of the study. The result shown that most of the Indian compound archers fall in the average level as archery is game of concentration and they fall in average level.

Keywords: anxiety, SCAT, elite, archers, compound etc

Introduction
In today's era performance in sports is a result of physical, physiological, and psychological training, although other factors, such as equipment and environment, may affect the performance. Training of a sport generally begins with physical or biomechanical factors. It covers basic posture, body movements, and motions. Second stage of training covers physiological factors, including endurance, power, and fatigue control methods. Coaches are mainly involved in the physical and physiological training.

Psychology is an academic and applied discipline that involves the scientific study of mental functions and behaviours. Psychology has the immediate goal of understanding individuals and groups by both establishing general principles and researching specific cases, and by many accounts it ultimately aims to benefit society. Psychologists explore concepts such as perception, cognition, attention, emotion, phenomenology, motivation, brain functioning, personality, behaviour, and interpersonal relationships, including psychological resilience, family resilience, and other areas.

Anxiety plays a paramount role in sports. It is the challenge in sports participation, which produces anxiety. Anxiety determines how successful he would be. Anxiety may be positive motivating force or it may interfere with successful performance in sport events. The degree of anxiety also varies with a number of different conditions. Anxiety is likely to be greater in higher competitive sports than in relatively non-competitive sports, because in the competitive sports, participants are made upon them to succeed**.** In archery compound is one of its events. A compound bow is a modern bow that uses a levering system, usually of cables and pulleys to bend the limbs. The limbs of a compound bow are much stiffer than those of a Recurve bow or longbow. This limb stiffness makes the compound bow more energy-efficient than other bows, in conjunction with the pulley/cams. The compound bow has its string applied to pulleys (cams), and one or both of the pulleys have one or more cables attached to the opposite limb. A compound bow moves a lot of the weight away from the draw string (hand), allowing for longer, more accurate and far less strenuous aiming, especially when shooting several times in a row. The compound bow is little affected by changes in temperature and humidity and this gives it superior accuracy, velocity, and distance compared to other bows. The compound bow was first developed in 1966 by Holless Wilbur Allen in Missouri, and a US patent was granted in 1969. The compound bow has become increasingly popular. In the United States, the compound is the dominant form of bow.

Material and Methods
Selection of the subject
For the purpose of the study, top eight elite Indian Archers of compound Division were selected (Men and Women) from National Ranking Archery Tournament (NRAT). The age of the subjects were ranging from 17-35 years.

Selection of variables
The questionnaires of sports competitive anxiety test (Martens 1977) [22] were taken keeping in mind the feasibility and importance of psychological aspects for investigation purpose of this study. The reliability of the test is 0.77 (r=0.77)

Criterion measure
To measure competition related anxiety of the athletes Sport

Competition Anxiety Test (SCAT) developed by Rainer Martens was introduced. Then each athlete's composite score (CS) was found. Then that score was analysed according to SCAT score analysis norms.

Administration of the questionnaire

The study was mainly based upon primary data collected from the selected elite Indian Archers (top eight) of Compound divisions of bow. The questionnaire were distributed among the subjects, which was fill up by the all the subjects and necessary information for the study were collected during National Ranking Archery Tournament (NRAT) held at Yamuna Sports Complex on 12th jan,2014 followed by four National Ranking Archery Events.

The following questionnaire filling up standardized protocol adopted:

- The subjects were available for the specific event held in Delhi. So, the scholar visited archers at competition venue to collect the data.
- SCAT questionnaire was administrated on the elite archers selected for final National Ranking Archery Tournament.
- All the personal records of the subject were kept secret.
- The questionnaire of selected traits was making available in English and Hindi for better understanding to subjects.

All the instruction was explain to all subjects regarding reading, understanding, filling up the questionnaire and the answer as honestly as they can. There is no point in trying to make you look good that would be proved non productive and will produce false result.

Results and Discussion

Statistical Technique

In this study, to analysis and assess the competitive anxiety level of the elite Indian archers, the following statistical calculation were computed - Mean, Standard Deviation and T-test.

Table 1: Descriptive statistics for scat scores of compound archers

Event	N	Mean	S.d.	Std. Error mean
Compound	16	17.69	4.17	1.04

Explanation of table no. 1: representing descriptive analysis of SCAT score of compound archers. The mean and standard deviation value for Compound archers was found to be 17.69 and 4.17 respectively.

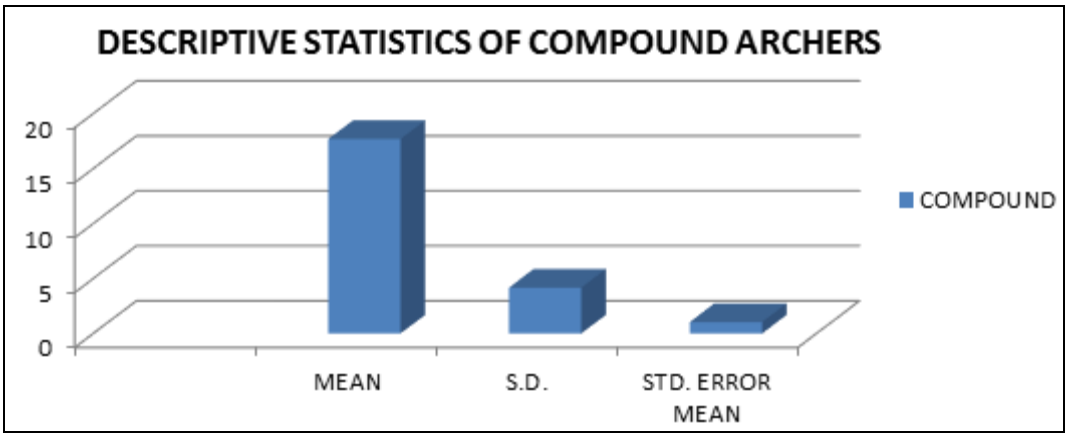

Fig 1: Descriptive statistics for scat scores of compound archers

Conclusion

In order to fulfil the objective of research the scholar made assessment of compound archers of India in terms of state competition anxiety. As archery is the game of concentration and also a mental sport, which requires high levels of attention. In Competitions, archers should repeat shooting for a long time, and every shot requires high attention. For good performance, *i.e.*, high score, stable position and posture, consistent movement, and precise shooting skills are also required.The result obtained manifested that most of the compound archers fall in the average level which means that they have an average level of anxiety.

Recommendations

On the basis of the finding and conclusion of the study, the following recommendations have been made:

- It is recommended that a controlled scientific questionnaire type of study may be undertaken on Elite International Archers.
- This is recommended that we can compare the anxiety level of Elite Indian and Foreign Archers through SCAT questionnaire.
- The similar studies may be reported by samples of different age groups at many level of competition.
- The similar study may be taken with both the sexes on comparison basis.
- The similar research can be done to assess anxiety level in other sports/games.
- It is highly recommended that then sports coaches and physical educators to assess, evaluate the player's anxiety level and enhance the sports performance should consider results.

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