



TO STUDY THE EFFECT OF ANXIETY LEVEL ON PERFORMANCE OF MALE ARCHERS IN ARCHERY & DEVELOP A TRAINING MODULE FOR ENHANCING PERFORMANCE

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ABSTRACT:

In this, Study is related to effect of Competitive State anxiety & competitive performance has become a major topic of concern to sports psychologist in recent years. The present study is mainly concerned with anxiety in archery event players and its relation with their performance who participated in the state level competition. A researcher himself, being a sprinter, has experienced such situations and hence wants to study the effect of competitive state anxiety and performance. He has therefore undertaken the study entitled To Study the Effect of Anxiety level on Performance of Male Archers in Archery and develop a Training Module for Enhancing Performance. The study was an experimental research one group pretest post test Experimental research. The male Archer of the Maharashtra state aged between 16-20 years will be considered as the total population of the study. The sample of the study was selected using convenience sampling method. The data was collected at state meet 16TH state Championship 2018 at Kolhapur for data collection the tools used was the Competitive State Anxiety inventory -2 (CSAI-2) by Martens, Vealey, & Burton (1990). The specific tool measures, cognitive, somatic anxiety, & self-confidence. After deep study it was decided that the training module would include different anxiety moderating psychological techniques and treatments such as Meditation, Progressive relaxation and Self talk. The module prepared was shown to experts for their opinions and suggestion which were followed for further refinement of the module. To check the feasibility of the module pilot study was conducted. After developing the module, the training was implemented on the archer for 3 days a week for 30 minutes every session for 12 weeks. Post test showed significance difference has been found performance and anxiety level due to training module. The result of the research showed that archery player reported reduce of Cognitive Anxiety and Somatic Anxiety and high level Self Confidence. Furthermore these player displayed higher self-confidence with positive effect on their performance. Cognitive anxiety and somatic anxiety are positively correlated.

KEYWORDS:

COGNITIVE ANXIETY, SOMATIC ANXIETY, SELF CONFIDENCE, PERFORMANCE.

1. INTRODUCTION

The complexity of competition in the modern life has heightened the anxiety in these days. In light of this, the twentieth century is termed as the 'Age of Anxiety.' In modern competitive sports also the anxiety in sportsmen has affected their performance. As the physical load during training of sportsmen for international competition is being increased day by day, the psychological stress during competition is also intensified. The archers like other human beings, apparently, are anxiety prone while participating in competitive sports. During playing situation, the sports men are by and large fearful to some degree which eventually affects their performance. This is a natural phenomenon. No human being is free from fear from setting provided by competitive sports. It is usual to observe archers who either is unable to act because of fear of whose fear at least interfere with his effective performance. The world 'fear' here refers to a rational appraisal of a real threatening situation and term anxiety denotes an abnormal apprehension of such a situation. Anxiety is a complex emotional state characterized by a general by tension. It is usually accompanied by tension.

It is related to apprehension and fear and is frequently associated with failure, either real or anticipated. It often

has to do with inter-personal relation and social situation. Feeling of rejection and insecurity are usually a part of anxiety. According to Frost. (1971), Anxiety is an uneasiness and feeling of foreboding often found when a person is about to embark on a hazardous venture; it is often accompanied by a strong desire to excel." Hence anxiety state arises from faulty adaptation to the stresses and strains of life and is caused by over-action in an attempt to meet these difficulties¹.

The symptoms of anxiety in state may be expressed by apprehension, gloomy foreboding, fear of dying, feelings of insecurity and general excitement. Fatigue, insomnia, gastrointestinal disturbances and depression are found in many individuals having anxiety. Some individuals exhibit cardiac, disorders, emotional instability, inferiority feelings, panic states, subject thought disturbance. Strange fear, giddiness etc. are noted in many cases. Many anxiety-ridden persons often complain of a general loss of interest and an inability to concentrate or think. Other symptoms, like excessive perspiration of hands, increased frequency of muscular tremors in various part of the body such as rise in eye-blink rate and fast respiration².

Anxiety is a topic particularly relevant to sports: The

threat of a negative evaluation or negative performance can manifest itself in all aspects of competition from beginning to end. Let's look at some of the ways that anxiety manifests itself in the archers in two key areas precipitation and competition³.

1.1. RELEVANCE OF THE PROBLEM

The study of anxiety has become very important to sports psychologist and research work in the field on Physical Education. Expression such as a choking, having butterflies in the stomach and getting high are often used to describe the various effects that anxiety can have on a person who cannot cope with the anxiety that is always present in any competition of sports.

1.2. STATEMENT OF THE PROBLEM

Anxiety can enhance or inhibit sports performance. Whether the effect is positive or negative depends on level of anxiety and on individual perceived situations. Nervousness and fear are often used synonymously with anxiety. Performance is associated with competitive State anxiety and the study of anxiety and its relation to their performance in archers is of great importance. The researcher himself, being an Archer, has experienced such situations and hence studied the effect of competitive state anxiety and performance and develops a module for enhancing their performance. He has therefore undertaken study entitled. "To Study the Effect of Anxiety level on Performance of Male Archers in Archery & develop a Training Module for Enhancing Performance"

1.3. OBJECTIVES OF THE STUDY

- 1.3.1. To assess the anxiety level of male archers.
- 1.3.2. To measure the Somatic anxiety, Cognitive anxiety and Self Confidence of archers.
- 1.3.3. To measure the performance of male archers.
- 1.3.4. To develop a optimizing anxiety level module for enhancing performance
- 1.3.4. To study the effect of optimal anxiety training module on performance.
- 1.3.5. To study the effect of anxiety level prior to competition before and after Training.

1.4. ASSUMPTION

- 1.4.1. It was assumed that the subjects are well-trained.
- 1.4.2. It was assumed that they was give proper response to the Inventory.
- 1.4.3. All the situations and circumstances was be dealt according to the State levels competitive status.
- 1.4.4. It was assumed that Archer show various anxiety levels.
- 1.4.5. It was assumed that Archer was follow the training schedule given to them.

1.5. HYPOTHESIS

H₁: There will be significant effect on anxiety level of Archer due to the training

Module.

H₂: There will be significant effect of training module on the performance of male Archers.

H₀₁: There will be no significant effect on anxiety level of Archers due to the training module.

H₀₂: There will be no significant effect of training module on the performance

Of male Archers

1.6. LIMITATION OF THE STUDY

1.6.1 Daily routine, diet of subjects, Leisure time, and rest of students cannot be controlled by researcher and hence was a limitation to the study.

1.6.1 Collection of the data was not possible single handedly; the researcher took help from a number of qualified professional from the field of sports and games to facilitate easy data collection. However, the research cannot control the intra individual variation of this assistance.

1.6.4 Although psychological variables was be assessed during this study, the related factors of the Archer during assessment testing period cannot be controlled.

1.7. DELIMITATION OF THE STUDY

Since the researcher had to work successfully with proper planning within limited time and finance, he delimited the study as follows.

1.7.1 There are various event in Archery but, researcher has delimited his study to wooden, FITA, Compound event only.

1.7.2. The study is delimited to Male Archer of age 16 to 20 years only.

1.7.3. The study is delimited to Competitive state anxiety only.

1.7.4. The Training Module Developed was implemented three months for four days weekly, each of 45 minute session only.

1.7.3 The implementation of training module was delimit to the situation changes.

1.7.4. The competitive state Anxiety Inventory-2(CSAI-2) by Martens, Vealey & burton, (1990) was use for the present study.

1.8. DEFINITION:

ANXIETY

The heightened state of emotional arousal prior & during competitions is called anxiety⁴.

COMPETITIVE ANXIETY

Competitive anxiety is the sports -Specific counter part of the motive to avoid failure or tendency to become anxious and worried about failure in Sports competition⁵.

COGNITIVE ANXIETY

According to Martens, Vealey, and Burton (1990). Cognitive anxiety is the mental component of anxiety and

is caused by negative performance evaluations⁶.

SOMATIC ANXIETY

According to Martens, Vealey, and Burto. (1990). Somatic anxiety is the physiological and affective elements of the anxiety experience that related to autonomic arousal. Manifestations of somatic anxiety would include things such as butter palms, muscle tension, elevated hear rate and shortness of breath

3. METHODOLOGY

The present study was undertaken with a view to evaluate the "To Study the Effect of Anxiety level on Male Archer Performance in Archery Event and to develop a Module for Enhancing Performances". The methodology followed to conduct this experiment research been presented in this chapter.. The details of the subjects, experiment, tools of study and statistical tools used in this study are given below.

RESEARCH METHOD

For this study Experimental research method was use. For this research one group pre test and Post test design was use.

DESIGN OF THE STUDY

The present study was Experimental designed. Experimental design is the blue print of the procedure that enables the researcher to test hypotheses by reaching valid conclusion about relationship between independent variables. Selection of particular designed is based on thepropose of experimental, the types of variables to be manipulated and the condition or limiting factor under which it is conducted. The designed deal with such practical problem as how subject are to be assigned to experimental groups, the way variables are to be manipulated and controlled, they way extraneous variables are to be controlled, how observation are to be made, and the types of statistical analysis to be employed. For the current study it was found difficult to get enough subjects for control group and experimental group so it was decide for this research one group pre test and post design was selected. For the effect of the treatment the difference between the pre-test and post test scores was calculated. However, no comparison with control group is provided¹.

ONE GROUP, PRETEST-POSTTEST DESIGN

$O_1 \quad X \quad O_2$

O_1 = Pre-test

O_2 =Post-test

ONE GROUP PRE TEST POST TEST

VARIABLES OF THE STUDY

Variables are condition that researcher manipulates, controls or observes. This study consisted of two variables: Independent variables and Dependent variables.

INDEPENDENT VARIABLES

For this study Independent variables are

- ✓ Progressive Muscles Relaxation training
- ✓ Self Talk script
- ✓ Meditation

These variables were use to bring about change in the dependent variables

Competitive state anxiety inventory -2(CSAI-2) by Martens, Vealey & Burton, (1990)

INDEPENDENT VARIABLES

For this research somatic anxiety, cognitive anxiety, self confidence and performance are dependent variables.

CONFOUNDING VARIABLES

For this study confounding variables are the practice scheduled, individuals feelings, of the subject these variables has been control as much as possible

POPULATION

The male archers of Archery Event of the Maharashtra state aged between 16-18 years was be considered as the total population of the study.

SAMPLE

Non-Probability sampling method was use for this study. For selecting the sample convenience sample method was use to select the subjects. Out of the total population when the sample was select for experimental research certain things were taken in to consideration. The sample was such that they received all most same type of training, diet, facilities. The confounding variables were minimizing as much as possible. Players to work injured were not included sample. Players who would be busy in competitions during the training session were not considering for this study. While selecting the sample it was taken in to consideration that this was an experimental research were the researcher had to give training to the subjects for consecutive three month. From the total population, players from SAI, Centre, Aurangabad, were select as sample for the study. Archery Archer of Age Group between 16 to 18 years were selected as subjects. Sample for the experimental group was selected using Convenience sampling method.

Wooden – 21 Players

Recurve – 19 Players

Compound – 14 Players

PROCEDURE OF THE STUDY

PHASE – I: PRE-TEST

First the researcher had given the ideas about his research to the coaches of SAI centre, Aurangabad, and asked there reviews about research. The Researcher carried out seminar on selected subjects and explain about the process of research and training and there benefits. Before the 30 min competitions researcher had been taken the pre test on selected subjects and after that we had taken the performance after competitions.

PHASE-II: TRAINING OR TREATMENT, AND

The researcher gave the treatment to the selected subjects. Researcher started the Treatment according to his training programmed. After the pre test was over, all the selected subject were exposed to 12 week training of Progressive muscle relaxation, Meditation, Self confidence, Self talk, for 45 minutes in the evening weekly four days.

Following training Programmed as follows...

POST TEST: (PHASE III)

Finally, when the treatment or training period of 12 week was over, 30 minutes before competitions post test were taken and the Data was collected and analyzed.

PHASE I

DATA COLLECTION

After the sample selection the data collection was done during the inter-SAI competition at Aurangabad. Assistants were used for the data collection as it was not possible for the researcher alone to conduct the test. 30 minutes prior to the archer's event the questioner was administered to the archers. After the archers event was over his performance was recorded from the official score sheet.

TOOLS OF DATA COLLECTION

Competitive Sport Anxiety Inventory - 2

Competitive state anxiety was assessed by using the Competitive State Anxiety Inventory- 2 (CSAI-2, Martens et al. 1990) which is a self report, psychometric state anxiety inventory, consisting of 27 items. The CSAI-2 normally takes less than five minutes to complete and was administered 30 minutes before competition.

TESTER'S RELIABILITY

For the data collection the researcher used assistants. The research assistances who were involved in the data collection process were thoroughly trained before the actual procedures. The entire testers performed measurement of trail basis. Reliability of sample was determined by test-retest method during the pilot study. The reliability coefficient ranged from 0.63 to 0.69 on all the variables in the study. The process of the data collection was determine keeping in view, the standard protocols of measurement.

TRAINING MODULE

Before preparing the training module the researcher studied various reviews related to anxiety and the methods used to bring anxiety to the optimum level. Books related to anxiety and performance for sportspersons and archers were referred and information collected. After deep study it was decided that the training module would include different anxiety moderating psychological techniques and treatments such as –

Meditation, Progressive relaxation, Goal setting, Self talk, Implementation of positive Statement under the three main heads-

1. Meditation
2. Progressive Muscle Relaxation

3. Self Talk

The module prepared was show to experts for their opinions and suggestion which were followed for further refinement of the module. To check the feasibility of the module pilot study was conduct.

PILOT STUDY-

To check the feasibility of the module pilot study was conducted on 10 Archery student of Arts & Science College Bhalod, Jalgaon for a period of three weeks. The study helped to know the time

Require for the trainings, the difficulties in the training, the problems which could arise in the treatment. All these problems were rectified and the module was finalize.

PHASE II

PROCEDURE OF TRAINING

After preparing the final training module, the researcher discussed it with the coaches at SAI where the subjects were residing and undergoing training for their respective events. The schedule of the subjects was take into consideration before scheduling the Psychological training sessions. After going through various reviews the times of the sessions were also decided. The training sessions were some time before after and in between practice sessions. The sessions were planned 3 times a week for 30 minutes per sessions for consecutive twelve weeks. The sessions were taken before or after the Afternoon practice sessions at 4.30 pm every day. The hall near the practice ground and sometimes the ground itself was used for conducting the sessions.

PHASE III

POST TEST DATA COLLECTION AND STATISTICAL PROCEDURE

Finally, when the treatment period of 12 week was over the anxiety of the subjects was again measured using Competitive State Anxiety Inventory- 2, 30 minutes before state trail competitions. The performance was take from the official records. The post test was take and the data collected and analyzed. Inferential Statistics and descriptive statistics tools was be used. For analyzing collected data of this study researcher used SPSS Version 18, the descriptive statistic consistent of Paired sample Statistic, Paired sample Correlation and Paired Sample Test.

STATISTICAL ANALYSIS

In the beginning the researcher processed the data using descriptive statistics .The mean, standard deviation and standard error of mean was calculate. The accumulate data was be examine and describe as descriptive mean scores in numerical formats, including a table of means and standard deviations...

4.1 ANALYSIS OF DATA

DESCRIPTIVE, CO-RELATIONAL STATISTICS AND PAIRED SAMPLES'T' TEST

In the beginning the researcher processed the data using descriptive statistics .The mean, standard deviation and standard error of mean was calculated. The accumulated data was examined and described as descriptive mean scores in numerical formats, including a table of means and standard deviations. Co relational statistics were used to examine the degree of the relation between performance of the various Archery players and pre competitive anxiety. Pearson Correlation method was used for this propose. Post intervention program the post test data was collected and processed for finding the effect of anxiety training program on performance and the pre competitive anxiety level of the Archers. The't' test for paired observation was used to determine whether group improved significantly in performance and optimal anxiety after training. Mean of performances and pre competitive anxiety were collected for each subject following the completion of the training program and compared to pre testing performances and pre competitive anxiety. The results of step wise data analysis have been presented below.

TABLE 4.1

DESCRIPTIVE STATISTICS OF INDIAN ARCHERS

	Performance	CA	SA	SC
Mean	23.63	24.36	28.12	26.64
Std. Error of Mean	0.11	0.41	0.48	0.33
Std. Deviation	0.71	2.69	0.39	2.13

Table 4.1 shows that the mean of INDIAN ROUND (WOODEN) 50M is 23.63 cm with S.D of 0.71cm .The mean of cognitive anxiety of the archers is 24.36 with a standard deviation of 2.69. The mean of somatic anxiety of the archers is 28.12 with a standard deviation of 0.39. The mean of self confidence of the archers is 26.64 with a standard deviation of 2.13.

TABLE 4.2

CORRELATION OF PRE PERFORMANCES OF INDIAN ARCHERS WITH COGNITIVE, SOMATIC ANXIETY AND SELF CONFIDENCE

	Pre Cognitive Anxiety	Pre Somatic Anxiety	Pre Self Confidence
Pearson Correlation	-0.06	0.530(*)	0.05
Sig. (2-tailed)	0.80	0.01	0.82

Table 4.2 shows at pre test level correlation between pre performance and Pre cognitive anxiety was -0.60 which was statistically not significant at 0.05 level of significance (p=0.80).

Table 4.2 shows at Pre test level correlation between pre performance and Somatic Anxiety was 0.53 which was statistically significant at 0.05 level of significance.

Table 4.2 shows at pre test level correlation between pre

performance and Self confidence was 0.053 which was statistically not significant at 0.01 level of significance (p= 0.82).

TABLE 4.3

DESCRIPTIVE STATISTICS OF RECURVE ARCHERS

	Performance	CA	SA	SC
Mean	12.90	22.66	23.03	25.92
Std. Error of Mean	0.17	0.46	0.60	0.57
Std. Deviation	1.04	2.84	3.68	3.50

Table 4.3 shows that the mean of RECURVE is 12.90 cm with S.D of 1.04 cm .The mean of cognitive anxiety of the archers is 22.66 with a standard deviation of 2.84. The mean of somatic anxiety of the archers is 23.03 with a standard deviation of 3.68. The mean of self confidence of the archers is 25.92 with a standard deviation of 3.50.

TABLE 4.4

CORRELATION OF PRE PERFORMANCES WITH PRE COGNITIVE, PRE SOMATIC ANXIETY AND PRE SELF CONFIDENCE OF RECURVE ARCHERS

	Pre Cognitive Anxiety	Pre Somatic Anxiety	Pre Self Confidence
Pearson Correlation	-0.73(**)	-0.87(**)	0.78(**)
Sig. (2-tailed)	0.00	0.00	0.00

Table 4.4 shows at pre test level correlation between pre performance and Pre cognitive anxiety was -0.73 which was statistically significant at 0.01 level of significance (p=0.01).

Table 4.4 shows at Pre test level correlation between pre performance and pre Somatic Anxiety was -0.87 which was statistically significant at 0.01 level of significance (p=0.01).

Table 4.4 shows at Pre test level correlation between pre performance and pre Self confidence was 0 .78 which was statistically significant at 0.01 level of significance (p=0.01).

TABLE 4.5

DESCRIPTIVE STATISTICS OF COMPOUND ARCHERS

	Performance	CA	SA	SC
Mean	6.23	23.60	22.36	27.21
Std. Error of Mean	.05	.55	.55	.47
Std. Deviation	.28	2.90	2.90	2.47

Table 4.5 shows that the mean of Compound Archer is 6.23 cm with S.D of 0.28 cm .The mean of cognitive anxiety of the archers is 23.60 with a standard deviation of 2.90. The mean of somatic anxiety of the archers is 22.26 with a

standard deviation of 2.90. The mean of self confidence of the archers is 27.21 with a standard deviation of 2.47

TABLE 4.6

CORRELATION OF PRE PERFORMANCES WITH PRE COGNITIVE, PRE SOMATIC ANXIETY AND PRE SELF CONFIDENCE OF COMPOUND ARCHERS

	Pre Cognitive Anxiety	Pre Somatic Anxiety	Pre Self Confidence
Pearson Correlation	-0.78(**)	-0.83(**)	0.77(**)
Sig. (2-tailed)	0.00	0.00	0.00

Table 4.6 show at pre test level correlation between pre performance and Pre cognitive anxiety and was -0.78 which was statistically significant at 0.01 level of significance (p=0.01)

Table 4.6 show at Pre test level correlation between pre performance and Somatic Anxiety was -0.83 which was statistically significant at 0.01 level of significance (p=0.01)

Table 4.6 show at Pre test level correlation between pre performance and Self confidence was -0.77 which was statistically significant at 0.01 level of significance (p=0.01)

DISCUSSION

It was seen that the module had significant effect on the anxiety levels. The performance level of the Archers showed significant improvement.

1. The effect of Psychological Training Module was found to be enhancing of the Indian Archer Performance. 50m shooting Pre performance was 23.99 cm training module help to improve the performance to 23.25 cm.
2. It was found that the psychological training module was effective reducing the Cognitive and Somatic Anxiety of Indian Archer. Indian Pre Cognitive Anxiety level mean was 25.38 the training module help to reduce the post cognitive anxiety level mean was 23.33. Indian Archer Pre Somatic Anxiety level mean was 24.71 the training module help to reduce the post somatic anxiety level mean was 22.00
3. Psychological Training Module significant enhances the self-confidence of Wooden(Indian) Archer performance. Pre self confidence level means was 6.18 the training module help to improve the post self confidence level mean was 6.27
4. The effect of Psychological Training Module was found to be enhancing of the RECURVE Archer Performance. Recurve pre performance mean was 13.06 cm distances the training module help to improve the post Recurve performance was mean

12.74 cm distances.

5. It was found that the psychological training module was effective reducing the Cognitive and Somatic Anxiety of INDIAN ARCHER. Recurve Archer Pre Cognitive Anxiety level mean was 23.84 the training module help to reduce the post cognitive anxiety level mean was 21.47 Pre Somatic Anxiety level mean was 24.68 the training module help to reduce the post somatic anxiety level mean was 21.36
6. Psychological Training Module significant enhances the self confidence of Recurve player's performance. Recurve Pre self confidence level mean was 26.68 cm the training module help to improve the post self confidence level mean was 25.15cm
7. The effect of Psychological Training Module was found to be enhancing of the Compound Archer Performance. Archer pre performance mean was 26.57 cm distances the training module help to improve the performance mean was 26.68 cm distance.
8. It was found that the psychological training module was effective reducing the Cognitive and Somatic Anxiety of Compound Archer. Archers Pre Cognitive Anxiety level mean was 24.42 the training module help to reduce the post cognitive anxiety was 22.78 Archers Pre Somatic Anxiety level mean was 22.85 the training module help to reduce the post somatic anxiety level mean was 21.85
9. It was found that the psychological training module was effective reducing the Cognitive and Somatic Anxiety of Compound Archer. Archers Pre self confidence level means was 26.57 the training module help to improve the post self confidence level mean was 27.85

CONCLUSION

From the above result and discussion result we can conclude that

1. The training modelled brought change son anxiety of the Archer.
2. The somatic anxiety of Archer showed positive changes due to the training module.
3. There was an increase a self confidence due to the intervention of training.
4. There was significance correlation between the dependent variables and performance.
5. The training module increases the performance of Archer.

From the above discussion the hypothesis H₀₁ and H₀₂ are rejected the hypothesis H₁ and d H₂ is retained There will be significant effect on anxiety level of Archer due to the training Module and there will be significant effect of

training module on the performance of track and field male Archers.

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