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# Effect t of Progressive Muscle relaxation Training on Competitive State Anxiety of Male Athlete in Track Event.

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#### Abstract:

The present study is mainly concerned with Athletics in Tract event players who participated in the state level competition. Now days, the Athletics Event is becoming as a professional sport rather than the competitive sport. So the competitiveness among the Track and field event players is growing up day by day with different color. Reason for such competitiveness arises naturally among the players, because of pressures such as equal competition, concern about fulfilling the expectation of their teachers, coaches, parents and peer group and personal needs. The present study investigated the Effect of Progressive Muscle Relaxation Training on Competitive Anxiety of Male Track Event. Research is study of competitive state anxiety Experimental research, which aimed at identifying the Effect of Progressive Muscle Relaxation Training on Competitive Anxiety of Male Track Event athletes of Kreeda prabodhini, Pune. In these study considered the track and field male athletes of Kreeda prabhodhani, Pune who participated in 19<sup>th</sup> school state athletics championship held at Mahalunge-Balewadi pune (2010-11). The populations of the study were 24 male athlete in track event, Kreeda Prabhodhani, Pune division aged 18 to 20 years, who participated in 19<sup>th</sup> school state athletics championship held at Mahalunge-Balewadi pune (2010-11) were selected as sample of the study and the technique employed was purposive sampling. 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. The scale consists of 27 items (9 – items subscale arranged on a 4 – point Likert – type scale ranging from 1 (none) to 4 (very much). In the study significance difference has been found. The result of the research showed that track and field male athletes reported moderate of Cognitive Anxiety, Somatic Anxiety and high level Self Confidence. Furthermore these athletes displayed higher self-confidence with positive effect on their performance. Cognitive anxiety and somatic anxiety are positively correlated.

Key words: Cognitive Anxiety, Somatic Anxiety, Self Confidence, Progressive Muscle Relaxation, Introduction

The present study is mainly Athletics in Track and field event players was participated in the State level competition. 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 players and athletes like other human beings, apparently, are anxiety prone while participating in competitive sports (Agyajit Singh. 2004). Sports and athletics create special opportunities for the study of the feelings of the athletes in various sporting events (Bray, Jones & Owen, 2002; Tielman, Peacock , Cureton & Dishman, 2002). Anxiety means a disturbed state of mind, emotional reactivity, arousal and nervousness and unpleasant state of mind. Anxiety is an essential ingredient of any competitive situation and without certain level of anxiety there cannot be competitive performance. Neither too high they could fail to achieve their goal. The impact of anxiety on sport performance has become an interest in the field of Sport Psychology within the last decade. Performance related anxiety, also referred to as competitive a-state anxiety composed of three states. The cognitive a-state is responsible for cognitive concerns such as worry and negative expectations about oneself or one's performance. The somatic state accounts for autonomic arousal such as muscle tension and increased heart rate. High levels of either cognitive a-state or somatic a-state negatively effect state self-confidence. Overall, competitive astate anxiety is defined as an emotional response to an unpleasant stimulus. Typical responses to an anxiety provoking stimulus include: muscle tension, increased breathing, and decreased concentration. It has been suggested that athletes are prone to experience this negative emotion for two reasons. First, they frequently find themselves in situations in which others can assess their success or failure. Second, the degree of success achieved by an athlete is measurable by goals such as distance, scores, or time. Furthermore, an examination of sport competition literature exemplifies the causes of competitive a-state anxiety. Some of the commonly cited causes include fear of failure, ego threat/fear of evaluation, and poor preparation or lack of perceived physical readiness. Generally, both psychological and physiological ramifications reveal the athlete's response to anxiety. In addition, studies have indicated that a reduction in competitive a-state anxiety may enhance athletic performance. Recently, the emphasis placed on the psychological aspect of athletics has exhibited psychological skill training to be equally important as physical training. Psychological skill training such as relaxation training can be used to lower both somatic anxiety and cognitive anxiety. Hence, such a training method can be implemented to reduce competitive anxiety and in turn, enhance athletic performance (Onestak, 1991). Moreover, relaxation techniques include: progressive muscle relaxation that is induced by instructions to tense and relax major muscle groups of the body; deep breathing which ensures calm respiration; and visualization techniques (Jacobson, 1938). The purpose of relaxation strategies is to allow the athlete to decrease anxiety prior to performance and in turn, reach his or her full athletic potential (Onestak, 1991). Previous research explored the effect of various relaxation training techniques on competitive a-state anxiety and performance. Anshel and Porter (1996), Bethany and Forrest (1998), and Savey and Beital (1997) have demonstrated further collective evidence that the application of psychological skill training programs can reduce competitive a-state anxiety as well as improve athletic performance. For example, Bethany and Forrest (1998) found that visuo-motor behavioral rehearsal, when employed by athletes can decrease stress and state anxiety. In support of this finding, Anshel and Porter (1996) also found that athletes who employed stress management techniques expressed better athletic performance. Future research may extend the examination and see exactly which sub-scale, somatic anxiety, cognitive anxiety and self-confidence is most effected by the psychological skill training. In consideration of the previous evidence that psychological skill training can reduce competitive anxiety, the present study will further investigate the impact of progressive muscle relaxation, a type of psychological skill training, on a-state competitive anxiety with an emphasis on the three sub-levels of competitive anxiety. Cognitive anxiety, somatic anxiety and state self-confidence will be examined. It will be beneficial to test if in fact, psychological skill training such as relaxation training lowers competitive anxiety and if so, which of the three sub-scales are most effected. Moreover, the present study will examine competitive anxiety and the impact of relaxation training. The variable being manipulated is the relaxation training, which is defined as progressive muscle relaxation. Progressive muscle relaxation generates relaxation by systematically progressing through skeletal muscles. The variables being measured are the subject's trait anxiety level, competitive anxiety level and the three sub-levels of state anxiety: somatic anxiety, Cognitive anxiety, and state self-confidence.

#### Methods

The purpose of the study was to find out the effect of progressive muscle relaxation training on competitive anxiety of male Track and Field Athlete of Kreeda Prabhodhani who participated in  $19^{th}$  school state Athletics Championship held at Mahalunge-Balewadi pune (2010-11). To achieve the purpose of the study 24 male Athlete in Track event track and field athlete were selected from Kreeda Prabhodhani, Pune, who participated in  $19^{th}$  school state athletics championship held at Mahalunge-Balewadi, Pune (2010-11) their age was ranged from 18 to 20 years. The present study is an experimental one pre and post. Purposive sampling technique was used for this, the selected samples (N=24) were divided into two equal groups. Group I was considered as Progressive Relaxation Training Group (PRTG) in which they underwent progressive muscle relaxation practices. Group II was considered as control group they are doing the regular practice for our event. The experimental group were given training for 3 days a week and for 6 weeks in total.

#### Variables of the study

#### Dependent

For this study Independent variables are

Progressive Muscles Relaxation training

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

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

#### Independent

Progressive Muscles Relaxation training.

**Procedure of the study:** As stated above all the selected subject were assigned two group Control Group and Experimental group.. The designer of the experimental has been planted in three phases.

Phase - I: Pretest

Phase-II: Training or Treatment, and

Phase-III: Post Test

**Pre test (Phase- I):**As a propose of the study is to see Effect of Progressive Muscle Relaxation on Competitive State Anxiety and Performance of male athlete in track event, all the subject of experimental group were exposed to Competitive State Anxiety Inventry-2(CSAI-2) test to record the pre test data for before the 30 minutes for competition.

#### Treatment stimuli (Phase-II)

After the pre test was over, all the subject of Experimental group were exposed to 06 week training of Progressive muscle relaxation for 35 minutes in the evening for Three days in weekly For total period of 06 weeks we are given the coach and researcher collar daily training programmed for the 35 minutes for evening session after the finish event practice.

# Post test: (Phase III)

Finally, when the treatment or training period of 06 week was over, 30 minutes before competitions were taken post test in trails competitions

# **Tools Used for 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.

#### **Description of CSAI-2**

The CSAI was revised to develop a sport –specific inventory that measured the cognitive and somatic components of A-state. The CSAI –2 was originally constructed to include subscales to measure not only cognitive state anxiety and somatic anxiety but also fear of physical harm and generalized anxiety. The development of the CSAI-2 as a sport-specific measure of multidimensional A-state followed a systematic Psychometric process. The CSAI-2 is an A-state inventory designed to measure existing state of cognitive state anxiety, somatic state anxiety, and state of self confidence in competitive situations,. The CSAI-2 was constructed primarily as research tool. It was administered three hour before competition. When administering the CSAI-2, it was recommended that the title on the form given to the subjects to be Illinois self-evaluation questionnaire. This technique helps to reduce the bias to the inventory. In addition antisocial instructions given by author of CSAI-2 was committed to memory and orally communicated with conviction to the respondents. Before allowing subjects to begin completing the CSAI-2 it was made sure that whether the instructions are completely understood and particularly that responses should be based on how the respondent feels at the moment.

#### Scoring the CSAI-2

The CSAI – 2 is scored by computing a separate total for each of the three subscales with scores ranging from a low of 9 to a high of 36. The higher the score, the greater the cognitive or somatic. A-state or the greater the state self-confidence. Total score for the inventory is not computed. The cognitive state anxiety is scored by totaling the responses for the following 9 items 1, 4, 7, 10, 13, 16, 19, 22 and 25. The somatic state anxiety subscale is scored by adding the responses to the following 9 items: 2, 5, 8, 11, 14, 17, 20, 23 and 26. Scoring for item 14 must be reversed in calculating the score for the somatic state anxiety subscale as indicated below:

# 1 = 4; 2 = 3; 3 = 2; 4 = 1

The state self-confidence subscale is scored by adding the following items 3, 6, 9, 12, 15, 18, 21, 24, and 27. Inventories that are missing no more than one response per subscale can still be scored, but any inventory in which two or more items from any one subscale are emitted should be invalidated. To obtain subscale scores when an item has been omitted, compute the mean item score for the eight answered items, multiply this value by 9, and then round the product to the nearest whole number

# **Progressive relaxation Training**

- 1. **Forehead.** Focus attention on your forehead. Squeeze the muscles in your forehead, holding for 15 seconds. Be careful only to tense the muscles of your forehead and to leave the rest of your body relaxed. Feel the muscles becoming tighter and tenser. Then, slowly release the tension in your forehead while counting for 30 seconds. Notice the difference in how your muscles feel and the sensation of relaxation. Continue to release the tension in your forehead until it feels completely relaxed. Continue breathing slowly and evenly.
- 2. Jaw. Now, shift attention to your jaw. Tense the muscles in your jaw holding for 15 seconds. Then, release the tension slowly while counting for 30 seconds. Notice the feeling of relaxation and continue to breathe slowly and evenly.
- 3. Neck and Shoulders. Now, shift attention to your neck and shoulders. Increase tension in your neck and shoulders by raising your shoulders up towards your ears and hold for 15 seconds. Slowly release the tension as you count for 30 seconds. Notice the tension melting away.

- 4. Arms and Hands. Slowly draw both hands into fists. Pull your fists into your chest and hold for 15 seconds, squeezing as tight as you can. Then, slowly release while you count for 30 seconds. Notice the feeling of relaxation.
- 5. **Buttocks.** Slowly increase tension in your buttocks over 15 seconds. Then, slowly release the tension over 30 seconds. Notice the tension melting away. Continue to breathe slowly and evenly.
- 6. Legs. Slowly, increase the tension in your quadriceps and calves over 15 seconds. Squeeze the muscles as hard as you can. Then, gently release the tension over 30 seconds. Notice the tension melting away and the feeling of relaxation that is left.
- 7. Feet. Slowly, increase the tension in your feet and toes. Tighten the muscles as much as you can. Then, slowly release the tension while you count for 30 seconds. Notice all the tension melting away. Continue breathing slowly and evenly.
- 8. Enjoy the feeling of relaxation sweeping through your body. Continue to breathe slowly and evenly. **Statistical Analysis:**

# TABLE-1

Significance of Mean Gains / Losses between Pre and Post Test of Progressive Relaxation Training (PRTG) on Competitive Anxiety of Male athlete in Track Event.

Variables Pre-test	Pre test Mean	Post-test Mean	Mean Diff	Standard Error	't' ratio
				Mean	
Cognitive Anxiety	21.50	20.08	1.42	.148	9.53*
Somatic Anxiety	22.08	20.50	1.58	.148	10.65*
Self Confidence	21.25	22.75	-1.50	.151	9.95*

Table -1 indicates that the obtained't' ratios were: 9.53 for cognitive anxiety, 10.65 for somatic anxiety, 9.95 for self confidence. The obtained't' ratios on competitive anxiety. When compared with the critical value of 2.201 for degrees of freedom of 111 it was found that the mean gains and mean losses statistically significant. Resulting of these confirm that six week practice of progressive relaxation training produced a significant improvement in cognitive anxiety (1.42; p<0.05), somatic anxiety (1.58; p<0.05), self confidence (-1.50; p<0.05), statistically significant and explained its effect positively.

#### TABLE-2

Significance of Mean Gains / Losses between Pre and Post Test of Control Group on Competitive Anxiety of Track field Event.

Variables Pre-test	Pre test Mean	Post-test Mean	Mean Diff	Standard Error Mean	't' ratio
Cognitive Anxiety	21.50	20.08	0.30	.923	1.45
Somatic Anxiety	21.25	20.85	0.40	.233	1.71
Self Confidence	21.50	21.75	-0.25	.910	1.22

Table -2 indicates that the obtained 't' ratios were: 1.45 for cognitive anxiety, 1.71 for somatic anxiety, 1.22 for self confidence. The obtained 't' ratios on competitive anxiety. When compared with the critical value of 2.201 for degrees of freedom of 111 it was found that the mean gains and mean losses statistically not significant. Resulting of these confirm that so it was found that the control group did not show significant improvement in cognitive anxiety (0.30; p>0.05), somatic anxiety (0.40; p>0.05), self confidence (-0.25; p>0.05), statistically not significant.

#### Results

The study was designed to find out the effects of progressive muscle relaxation training on competitive anxiety of male in Track and Field male athlete state players. The objective framed in the present study to test the data collected on variables: cognitive anxiety, somatic anxiety and self confidence. As one of the objectives of the present study was to test the effects of progressive muscle relaxation training on competitive anxiety, the initial test means and final test means were tested treatment wise by using the paired sample t-test. SPSS 13.0 statistical package.

# **Discussion On Findings**

The purpose of the present study was to examine if progressive muscle relaxation decreased competitive anxiety, and if so, which of the three sub-scales: cognitive anxiety, somatic anxiety, And self-confidence were most effected by the training. The only statistically significant effects found between the experimental group and the control group occurred on the cognitive anxiety, Somatic anxiety and self confidence sub-scale of competitive anxiety. The competitive anxiety of the subjects was tested first producing no statistical significant effects between the experimental and control group. Although, previous

research suggests that various relaxation training techniques, including progressive muscle relaxation, decrease full-scale competitive astate anxiety (Bethany & Forrest, 1998), the results of the present study did not confirm these observations. The Competitive State Anxiety Inventory (CSAI-2) (Martens, Vealey, & Burton, 1990) produced no statistical significance for the overall a-state anxiety levels between the relaxation training experimental group (group 1) and the no training control group (group 2). However, the mean scores of trait and state for group I exhibited a greater decrease from competitive anxiety. There are several reasons for the lack of statistical significance between the groups. Originally, the subject pool contained 24 subjects. Other limitations of the present study pertained to a restricted form of psychological skill training. The findings of this case are supported with the theoretical construct of Jacobson (1938). According to him Progressive muscle relaxing of various muscle groups although the exercise is a relaxation technique, we start with anxiety because most individuals find it easier to go from a tensed state to a relaxed state then they muscles. Progressing from a tensed state to relaxation also helps to develop the ability to recognize and differentiate the feelings of tension and relaxation in the muscles. Relaxation improves alertness and awareness in such a way that the performance will be maximized. In short, learning to hang loose in all situations is talking one giant step towards playing at consistently high levels at or near potential performance.

#### Conclusion

From the results of comparative effect among the progressive relaxation training, and control group on criterion variables, it was concluded that players belong to progressive relaxation training is performed better in cognitive anxiety, somatic anxiety and self confidence as compared to control group.

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