

# Effect of Progressive Muscle Relaxation Training on Competitive Anxiety of Male Inter-Collegiate Volleyball Players

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**Abstract.** The present study is mainly concerned with volleyball players who participated in the high level competition. Now days, the Game volleyball is becoming as a professional sport rather than the competitive sport. So the competitiveness among the volleyball players is growing up day by day with different color. Reason for such competitiveness is arise 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 psychological skill training techniques such as progressive muscle relaxation on competitive anxiety. The three sub-scales of competitive anxiety were also examined; cognitive anxiety, somatic anxiety and self-confidence. The study consisted of 24 male volleyball players from PSG College of Arts and Science, Coimbatore. Their age ranged from 18 to 25 years. The Competitive State Anxiety Inventory-2 (CSAI-2), also developed by Martens, Vealey, & Burton (1990) were used. Subjects were randomly assigned to either a relaxation training experimental group, or a no relaxation training control group. Both the experimental groups were given training for 3 days a week and for 6 weeks in total. Paired t-tests were used to test the effect of treatment groups individually between pre and post –tests of all the groups on variables used in the present study. The result of the study reveals that there was significant difference in 0.05 levels of competitive anxiety among the male inter-collegiate volleyball players.

**Key words:** Relaxation training, competitive anxiety

## 1. Introduction

The present study is mainly concerned with volleyball players was participated in the high level competition. Now days, the game volleyball is becoming as a professional sport rather than the competitive sport. So the competitiveness among the volleyball players is growing up day by day with different color. Reason for such competitiveness is arise 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. It leads to mental and physical stress. In high level stress, the player's vision may have to be narrow and could not understand the things around them. Hence having the high level stress, players are unable to show their real effort in matches though they are having the needed physical and mental resources. Hence the physical education teachers and coaches are in need to study the means and methods needed to face such competitive pressures whereby they can equip their players to perform well. As far as means and methods for high performance in sports are concerned, they are varied with the nature and type of competition such as low level competition and high level competition. In high level competition, sport is demanding high level mental toughness. Mental toughness of a player can be strengthened only through the implication of cognitive based training. Cognitive based training helps them to realize the nature of internal and external pressures whereby they can easily face the competitive pressures and to show their talents in time. Having this thirst, the investigator has impelled to study.

## 2. Methods

The purpose of the study was to find out the effect of progressive muscle relaxation training on competitive anxiety of male inter-collegiate volleyball players. To achieve the purpose of the study twenty

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four male volleyball players were selected from PSG College of Arts and Science, Coimbatore. Their age was ranged from 18 to 25 years. The purpose of the present study was explained to them clearly where by their consent to serve as samples were obtained. The present study is an experimental one and to test the effects of varied forms of intervening strategies, the care was taken in distributing the samples to each experimental group. 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 and they did not under go any practices. Both the experimental groups were given training for 3 days a week and for 6 weeks in total.

## 2.1. Research Instrument

### Tool Used in the Study: *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 ten minutes before competition and practice session. Before allowing subjects to begin completing the CSAI-2, instructions were explained, and researchers ensured that all instructions were completely understood. State anxiety was measured by the Competitive State Anxiety Inventory - 2 (CSAI - 2) (Martens et al 1990). The CSAI – 2 assess two components of state anxiety, cognitive worry and somatic anxiety, and a related constricts self-confidence.

The CSAI - 2 contains 9 items that represent each sub - scale. Thus, each sub - scale has a range from 9 to 36. Higher scores on cognitive and somatic anxiety indicate higher levels of anxiety whereas higher scores on self – confidence sub – scale correspond to higher levels of self-confidence (Martens et al. 1990 and Mckay et al. 1997).

## 2.2. Progressive relaxation Training

The volleyball players were comfortable with the breathing technique. It is systematic technique developed by Jacobson. A volleyball player is asked to inhale and tense a specific muscle group for approximately 7 – 10 seconds followed by releasing them for 15 – 20 seconds. The volleyball player then exhales and releases the tension from the specified muscle group, concentrating on the feelings of relaxation. This procedure is repeated for a number of muscle groups with each group begin tensed and relaxed three times. The muscle groups used with the volleyball team are listed.

Table1. The Muscle groups used in the Progressive Relaxation Exercise

Muscle Group	Instructions
Hand	Clench your left hand and feet the tension relax and let hand hang loosely. Same for right hand.
Wrists	Bend hand back, hyper extending your wrists relax.
Upper arms	Bend elbow towards your shoulders and tense biceps muscle relax.
Shoulders	Bring shoulders up toward yours ears. Relax, let your shoulders drop down.
Forehead	Wrinkle your forehead, raise your eyebrows relax.
Eyes	Close your eyes tightly relax.
Jaws	Clench your jaws tightly relax.
Tongue	Press your tongue against the roof of your mouth relax.
Mouth	Press your lips together tightly relax.
Neck	Turn your head so that your chin is over your right shoulder. Straighten and relax.
Neck and Jaws	Bend your head forward, pressing your chin against your chest. Straighten and relax.
Chest	Take a deep breath and hold it for 5 seconds, slowly exhale and relax.
Abdomen	Tighten your stomach muscles relax.
Back	Arch your back relax.
Thighs	Stretch your legs in front of you. Tighten your thigh muscles relax.
Hamstrings	Push your heels down into floor, tighten your hamstring muscles relax.
Calves	Point your toes toward your head relax.
Feet	Curl your toes toward the bottom of your feet relax.

### 3. Results

The study was designed to find out the effects of progressive muscle relaxation training on competitive anxiety of male inter-collegiate volleyball players. The test the objective framed in the present study 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.

Table 2. Significance of Mean Gains / Losses Between Pre and Post Test of Progressive Relaxation Training (Prtg ) on Competitive Anxiety of Volleyball Players

Variables	Pre-test	Post-test	Mean Diff.	Standard Error	't'-ratio
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*

\* Significance at 0.05 level

Table 2 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 1, 11 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. The graphical representation of responses has been exhibited in figure 1.

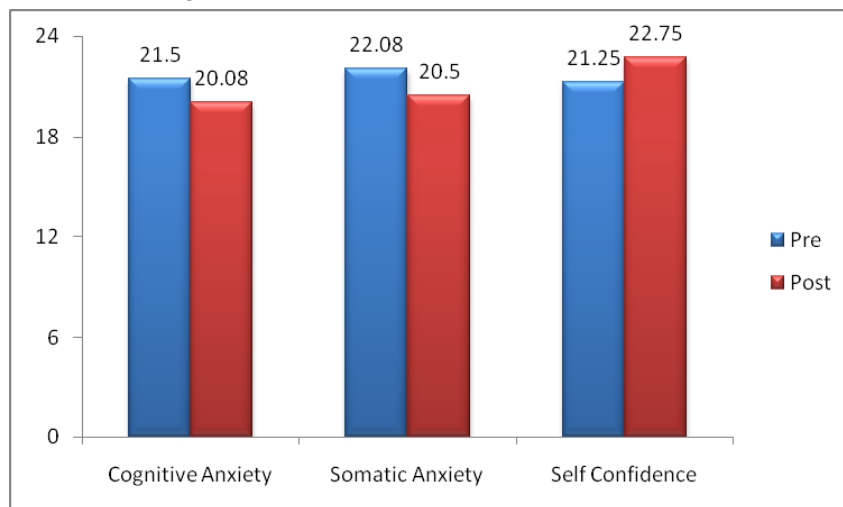


Fig. 1: Bar diagram showing that the pre test and post test means of progressive relaxation training group on competitive anxiety

Table 3. Significance of Mean Gains / Losses Between Pre and Post Test of Control Group on Competitive Anxiety of Volleyball Players

Variables	Pre-test	Post-test	Mean Diff.	Standard Error	't'-ratio
Cognitive Anxiety	21.15	20.85	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

\* Significance at 0.05 level

Table 3 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 1, 11 it was found that the mean gains and mean losses statistically no 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 no significant. The graphical representation of responses has been exhibited in figure-2.

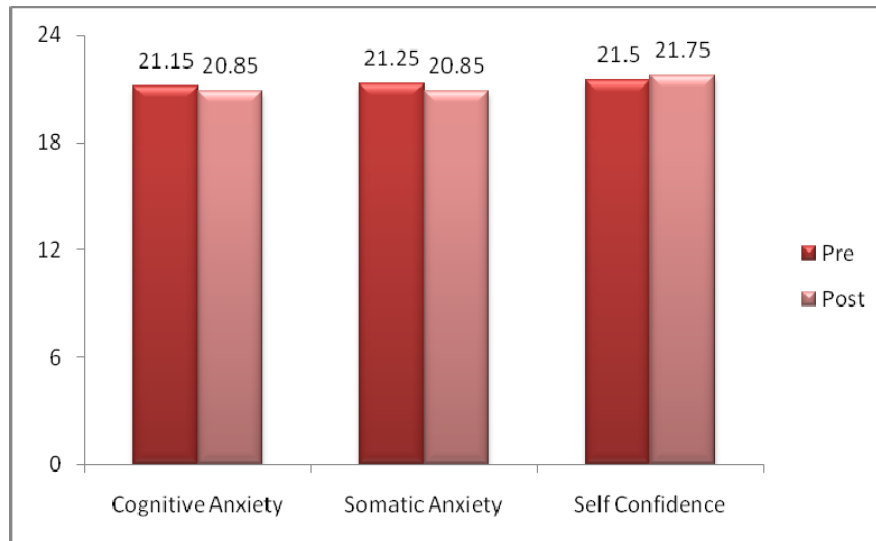


Fig. 2: Bar diagram showing that the pre test and post test means of control group on competitive anxiety

### 3.1. Discussion on findings

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 than 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.

### 4. 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.

### 5. References

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