

# Combined Effect of Yogasanas and Relaxation Training on Selected Psychological Variables among Tennis Players

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## ABSTRACT

*The purpose of the present study was to find out the combined effect of yoga and relaxation training on selected psychological variables namely stress, mental toughness and sports competition anxiety, among Tennis players. For achieving the purpose of the study total of 30 male Tennis players were selected as samples, from two Tennis academics in Chennai city. Their age ranged between 16 to 22 years and the selected subjects were divided in to two groups, equally, with 15 each as experimental and control group. All the selected subjects were state ranked male Tennis players and all of them were used to practice Tennis for the duration of two hours, every day except Mondays, and apart from the Tennis practice the experimental group underwent yoga and relaxation training for six weeks, in a schedule of weekly three days yogic practices and three days progressive muscle relaxation training, in alternative days, for one hour. To find out significant difference ANCOVA was used as a statistical tool. The statistical findings of the study revealed that there was a significant difference in stress, mental toughness and anxiety due to six weeks combined yoga and relaxation training. Further the mean value of experimental group indicated that there was a higher improvement in mental toughness and decreased in stress and sports competition anxiety than control group.*

## Key words

*yogic practice, progressive muscle relaxation, mental toughness, stress and anxiety*

## INTRODUCTION

Athletes are facing with many challenges and for facing these challenges they should have strong physical, technical, tactical and psychological skills. To enhance these qualities different types of training Programmes are essential. The elite level of sports, performance requires complete psychological preparation. The athletes become mentally strong to face any challenges on the field. Tennis is a mental game because Tennis players should have strong psychic power to overcome many psychological obstacles during the match. Each day, players work hard to improve these skills by many means and methods. Yoga and relaxation training have become

an accepted part of the training regimen, to improve psychic powers as well as physical skills. Yoga is becoming a common part of the preparation and workout routines in all the sports and games. The present study is also with the sole aim to find out the effect of yogic practices combined with deep muscle relaxation on stress, mental toughness and anxiety among Tennis players.

Progressive muscle relaxation are another effective and widely used strategy for stress relief and beneficial to improve many psychological qualities. It involves a two-step process in which you systematically tense and relax different muscle groups in the body. There is a

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substantial evidence that yoga is an imbalance at the mental, physical, or emotional level. Yoga is directed at improving our ability to cope with stressors. The tension associated with stress is stored mainly in the muscles, the diaphragm, and the nervous system. If these areas are relaxed stress is reduced, minimizing the impact of stress on the individual (Iyengar, 2001). An 8-week study was conducted on medical and premedical students to see if regular meditation for the 8-week period would make the students less anxious and stressed during an examination period. The results were positive; the meditation did lower the stress and anxiety level of the students (Bonadonna, 2003).

Athletic anxiety, or sports performance anxiety, happens to even the most skilled athletes. 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 noncompetitive sports because, in the competitive sports, participants are expected to win and great demands are made upon them to win (Agyajit Singh, 2008). Javnbakht et al (2009) reported that participation in a two-month yoga Programme lead to a significant reduction in perceived levels of anxiety in women who suffered from anxiety disorders. Kozasa et al. (2008), through their study, found out significant reduction in scores on anxiety, depression, and tension after one month practice of yoga programme. Michalsen et al. (2005) reported that 3 month Iyengar yoga programme for women suffering from mental distress resulted in significant improvements in perceived stress, state and trait anxiety, subjective well-being, vigor and decrease in depression.

Mental toughness is having the psychological edge that allows one to

perform at peak maximum effort and efficiency, during the demands that are placed on them during training, practice, or competition. Mentally tough athletes are self-confident, self-assured, and they are unaffected by competition or adversity. These athletes have the strong belief that they control their own destiny (Clough, P. J. et al, 2002). Goldberg (1998) defined 'Mental toughness is an ability to cope with or handle pressure'. Loehr (1982, 1986) emphasized that athletes and coaches felt that at least fifty percent of success is due to psychological factors that reflect mental toughness. Norris (1999) emphasized the importance of mental toughness in making of champion athlete. Almost Everybody accepts that yoga can improve the coordination between the body and the mind. Baskaran and Thirumalaikumar (2012) conducted a study on effect of asana and pranayama practices on selected psychological variables and playing ability among Tennis players and they found that there was a significant reduction in the anxiety and aggression due to experimental training and also improvement in playing ability among Tennis players.

There are certain moments during competition that appear to carry great psychological significance, when the momentum starts to shift in one direction or another. These situations require athletes to remain completely focused and calm in the face of difficult circumstances. It begins with tough thinking, emotionally controlled mind and stress free life. These all qualities are vital for improving Tennis performance. Combined yoga and relaxation training is relatively more beneficial, to improve psychological qualities.



## METHODOLOGY

The purpose of the present study was to find out the combined effect of yoga and relaxation training on selected psychological variables namely stress, mental toughness and sports competition anxiety among Tennis players. For achieving the purpose of the study total of 30 male Tennis players were selected as samples from two Tennis academies in Chennai city. Their age ranged between 16 to 22 years; and the selected subjects were divided into two groups, equally with 15 each, as experimental and control group. All the selected subjects were state ranked male Tennis players and all of them were used to practice Tennis for the duration of two hours every day except Mondays; and apart from the Tennis practice the experimental group underwent yoga and relaxation training for six weeks, in a schedule of weekly three days yogic practices and three days deep muscle relaxation training, in alternative days, for one hour. To find out significant difference ANCOVA was used as a statistical tool. The level of significance was fixed at 0.05 levels.

### Description of selected Yogic Practices and Deep relaxation training

#### Yogic Practices

The training package of asana includes *padmasana*, *shashankasana*, *paschimottanasana*, *vajrasana*, *koormasana*, *yogamudra*, *ardhamatsyendrasana*, *bhujankasana*, *makarasana*, *dhanurasana*, *sarvangasana* and *savasana* and three *pranayamas* includes *Kapalapāhi*, *Brahmari* and *Ujjayi Pranayamas*.

### Relaxation Training

The progressive muscle relaxation is a systematic technique for achieving a deep state of relaxation. It is a muscle could be relaxed by first tensing it for a few seconds and then releasing it. Tensing and releasing various muscle groups throughout the body produces a deep state of relaxation, which is found capable of relieving a variety of conditions, from high blood pressure to ulcerative colitis (Jacobson, 1938).

#### Testing procedure

The pre and posttest were conducted on selected psychological variables of anxiety through Rainer Martens Sports Competition Anxiety Test (SCAT); Stress was measured. Everly and Girdano Psychological Stress Scale; and mental toughness was assessed by Alan Goldberg's Mental Toughness Scale (MTQ).

## RESULTS & DISCUSSION

The statistical analysis of data on stress, mental toughness and sports competition anxiety collected from experimental and control group are presented separately in the Table 1, 2, and 3.

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The analysis of covariance, on the obtained or store of pre post and adjusted test on experimental and control groups, are presented in Table 1.

It was observed from the Table 1 that there were no significant differences in the pretest ( $F=1.49 < 4.20$ ) and post test ( $1.01 > 4.20$ ) for df 1 and 28 and there was a significant difference in adjusted post test ( $F=7.30 > 4.21$ ) for df 1 and 27 at 0.05 level of confidence. It indicated that the experimental group showed significant



**Table-1: Analysis of covariance for pre, post and adjusted posttest performance of experimental group and control group on stress**

Test	E. Group	C. Group	sv	Sum of Squares	df	Mean Square	F ratio
Pre test	30.47	27.40	B	70.53	1	70.53	1.49
			W	1321.33	28	47.19	
Post test	25.33	27.80	B	45.63	1	45.63	1.01
			W	1263.73	28	45.13	
Adjusted Mean	24.23	28.91	B	155.82	1	155.82	7.30*
			W	576.58	27	21.35	

\*Significant at 0.05 level of confidence with 1 and 28 (df) = 4.20 and 1 and 27 (df) = 4.21

The analysis of covariance on the data obtained for mental toughness of pre and post test on experimental and control group, are presented in Table2.

**Table-2: Analysis of covariance for pre, post and adjusted post test performance of experimental and control group on Mental Toughness**

TEST	Group		sv	Sum of Squares	df	Mean Square	F ratio
	Experi.	Control					
Pre test	17.4	18.26	B	5.633	1	5.63	0.358
			W	440.53	28	15.73	
Post test	24.33	20.33	B	120	1	120	6.404*
			W	524.66	28	18.73	
Adjusted Mean	24.55	20.11	B	146.24	1	146.24	9.652*

\*Significant at 0.05 level of confidence with 1 and 28 (df) = 4.20 and 1 and 27 (df) = 4.21

It was observed from the Table 2 that there was no significant difference in the pretest ( $F=0.358 < 4.20$ ) and significant differences were found in post test ( $6.404 > 4.20$ ) for df 1 and 28 and adjusted post test ( $F=9.652 > 4.21$ ) for df 1 and 27 at 0.05 level of confidence. It indicated that there was a significant difference in mental toughness due to six weeks yoga and relaxation training among Tennis players.

### Results on Sports Competition Anxiety

The analysis of covariance on the data obtained for sports competition anxiety of pre and post test, on experimental and control group, were presented in Table3.

**Table-3: Analysis of covariance for pre, post and adjusted post test performance of experimental and control group on sports competition Anxiety.**

TEST	Group		sv	Sum of Squares	df	Mean Square	F ratio
	Experi.	Control					
Pre test	20.4	18.6	B	24.3	1	24.3	0.845
			W	805.2	28	28.74	
Post test	17.26	18.66	B	19.2	1	19.2	0.892
			W	602.66	28	21.52	
Adjusted Mean	16.61	19.52	B	61.51	1	61.51	9.319*
			W	178.22	27	6.601	

\*Significant at 0.05 level of confidence with 1 and 28 (df) = 4.20 and 1 and 27 (df) = 4.21

It was observed from the Table 3 that there were no significant difference in the pre test ( $F=0.845 < 4.20$ ) and post test ( $0.892 > 4.20$ ) for df 1 and 28. However, a significant difference was observed in adjusted post test ( $F=9.319 > 4.21$ ) for df 1 and 27, at 0.05 level of confidence. It indicated that there was a significant difference in sports competition anxiety due to six weeks yoga and relaxation training among Tennis players.

## CONCLUSION

Based on the results and discussions of the present study the following conclusions are drawn :

1. The experimental group exposed to yoga and progressive muscle relaxation training significantly improved the psychological variables namely mental toughness and reduced in stress and sports competition anxiety.
2. The result of the study indicated that the yoga and relaxation training may be included in the training programme of Tennis players for better psychic state.
3. Relaxation training is helpful to relax physically and mentally; which provides better sports performance.

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