



## Manipulate of Progressive Muscle Shrinking Exercise on Elected Psychological Character of Female Kabaddi Players

**K. Jayachandran**

*Ph.D., Research Scholar, Department of Physical Education and Sports Sciences, Annamalai University, Chidambaram, Tamilnadu, India.*

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### Abstract

*The purpose of the study was to find out the manipulate of progressive muscle shrinking exercise on elected psychological character of female kabaddi players. To achieve this purpose of the study 30 female students studying in the faculty of arts, education and sciences, Annamalai University, Chidambaram were selected as subjects at random. Their age ranged between 18 to 24 years. The Competitive State Anxiety Inventory-2 (CSAI-2, also developed by Martens, et.al (1990) were used to collected relevant data. The selected subjects were divided in to two equal groups of fifteen each. The experimental group participate in the muscle lessening exercise for 3 days a week and for 6 weeks 25 minutes per session. The control group maintained their daily routine activities and no special training was given. The selected variables namely cognitive anxiety, somatic anxiety and self confidence. The collected data were analyzed statistically through analysis of covariance (ANCOVA) to find out the significant difference, if any between the groups. Whenever the obtained "F" ratio was found to be significant, The 0.05 level of confidence was fixed to test the level of significance which was considered as an appropriate. The results of the study showed that there was a significant difference exists between muscle lessening exercise group and control group. The muscle lessening exercise group showed significant improvement on cognitive anxiety, somatic anxiety and self confidence level compared to control group.*

**Keywords:** Muscle lessening exercise, cognitive anxiety, somatic anxiety and self confidence.

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### Introduction

Progressive muscle shrinking is a relaxation technique of stress management developed by American physician Edmund Jacobson in 1934. This progressive muscle lessening technique is focused on tensing and releasing tension in the 16 different muscle groups. Jacobson reasoned that since muscular tension usually followed as a byproduct of anxiety, one can lower and reduce anxiety by understanding and learning how to self relaxes those muscular tension. McCallie et al., (2006). The physical component involves the tensing and relaxing of muscle groups over the legs, abdomen, chest, arms and face. With the eyes closed and in a sequential pattern, a tension in a given muscle group is purposefully done for approximately 10 seconds and then released for 20 seconds before continuing with the next muscle group. The mental component focuses on the difference between the feelings of the tension and relaxation.

During the last few decades, Athletic Coaches and Athletes from a wide variety of sports have begun to realize the importance of the mental side of performance. More specifically, individuals involved with organized sports now understand that, for athletes to perform at

their peak level of efficiency, they must possess and use a number of psychological skills. Weinberg and Jackson (1983) point out that the fact that the interest shown by Coaches and Athletes to enhance their team's psychological skills proves the above statement true. This is also true with in the world of track and field as coaches and athletes have become interested in enhancing their athlete's psychological skills. All most all performance depends on the ability of application of psychological skills against any situation. Increased mental skill will often contribute to better performance. "Sports psychology has long been recognized as an essential element in all physical activities and is generally considered to be a basic component of sports performance says Bud Getchell (1976).

Competitive anxiety as situation specific construct was a tendency to perceive competitive situation as threatening and respond to these situation with feelings of apprehension or tension. Over the years, coaches and athletes have often used other, less technical term to describe anxiety in competitive athletic situation. Expression such as getting high, psyched up, psyched out; having butterflies and getting high vividly describe the various effects on performance of some athlete, in enhancing the performance of others. To better understand the various effect of anxiety on athletics, it is essential to have a more complete understanding of phenomenon of anxiety. Spielberg was the first

### Correspondence

K.Jayachandran,  
E-mail:vetri.nilavan80@gmail.com, Ph. +9199447 58131

researchers to clearly differentiate two types of anxiety are state and trait anxiety. Efficiency of performance on certain mental or motor tool has usually been used to measure anxiety (Iiwellyn and Blucker, 1982)

### Methodology

The purpose of the study was to find out the influence of progressive muscle lessening exercise on selected psychological personality of female kabaddi players. To achieve this purpose of the study 30 female students studying in the faculty of arts, education and sciences, Annamalai University, Chidamdaram were selected as subjects at random. Their age ranged between 18 to 24 years. The Competitive State Anxiety Inventory-2 (CSAI-2, also developed by Martens, et.al (1990) were used to collect relevant data. The selected subjects were divided into two equal groups of fifteen each. The experimental group participate in the muscle lessening exercise for 3 days a week and for 6 weeks 25 minutes per session. The control group maintained their daily routine activities and no special training was given.

The subjects of the two groups were tested on selected variable namely cognitive anxiety, somatic anxiety and self confidence at prior and immediately after the training period. The collected data were analyzed statistically through analysis of covariance (ANCOVA) to find out the significant difference, if any among the groups. The 0.5 level of confidence was fixed to test the level of significance which was considered as an appropriate.

The kabaddi players were comfortable with the breathing technique. It is systematic technique developed by Jacobson. Kabaddi players asked to inhale and tense a specific muscle group for approximately 7-10 seconds followed by releasing them for 5-20 seconds. The kabaddi players then exhale and release the tension from the specified muscle group, concentrating on the feelings of relaxation. This procedure was repeated for a number of muscle groups with each group begin tensed and relaxed three times. The muscle groups used with the kabaddi players are listed.

**Table 1.** Computation of Analysis of Covariance on Cognitive Anxiety

	EXP- G	CON- G	Source of Variance	Sum of Squares	df	Mean Squares	F-Ratio
Pre test mean	24.93	24.60	Between	0.833	1	0.83	0.44
			Within	52.533	28	1.87	
Post test mean	21.73	23.20	Between	16.133	1	16.13	7.61*
			Within	59.333	28	2.11	
Ad Post test mean	21.68	23.25	Between	18.294	1	18.29	9.16*
			Within	53.875	27	1.99	

(The required table value for significant at 0.05 level of confidence with df 1 and 28 and 1 and 27 were 4. 20 and 4. 21 respectively)

Table-1 shows that the adjusted post test means on cognitive anxiety of muscle lessening exercise group and control group are 21.68 and 23.25 respectively. The obtained F ratio of 9.16 for adjusted post-test mean is more than table value of 4.21 for df 1 and 27 require for

significance at 0.05 level of confidence on cognitive anxiety. The result of the study shows that there was significant difference between the adjusted post test mean of muscle lessening exercise group and control group on cognitive anxiety.

**Table II.** Computation of Analysis of Covariance on Somatic Anxiety

	EXP- G	CON- G	Source of Variance	Sum of Squares	df	Mean Squares	F-Ratio
Pre test mean	16.60	16.53	Between	0.033	1	0.033	0.04
			Within	23.333	28	0.83	
Post test mean	14.80	15.86	Between	8.533	1	8.533	14.81*
			Within	16.133	28	0.576	
Ad Post test mean	14.79	15.87	Between	8.745	1	8.745	15.61*
			Within	15.118	27	0.560	

(The required table value for significant at 0.05 level of confidence with df 1 and 28 and 1 and 27 were 4. 20 and 4. 21 respectively)

Table-II shows that the adjusted post test means on somatic anxiety of muscle lessening exercise group and control group are 14.79 and 15.87 respectively. The obtained F ratio of 15.61 for adjusted post-test mean is more than table value of 4.21 for df 1 and 27 require for

significance at 0.05 level of confidence on somatic anxiety. The result of the study shows that there was significant difference between the adjusted post test mean of muscle lessening exercise group and control group on somatic anxiety.

**Table III.** Computation of Analysis of Covariance on Self-Confidence

	EXP- G	CON- G	Source of Variance	Sum of Squares	df	Mean Squares	F-Ratio
Pre test mean	29.06	24.06	Between	7.50	1	7.50	1.10
			Within	189.86	28	6.78	
Post test mean	30.86	27.13	Between	104.53	1	104.53	12.22*
			Within	239.46	28	8.55	
Ad Post test mean	30.83	27.16	Between	97.46	1	97.46	11.01*
			Within	238.82	27	8.84	

(The required table value for significant at 0.05 level of confidence with df 1 and 28 and 1 and 27 were 4. 20 and 4. 21 respectively)

Table-III shows that the adjusted post test means on self-confidence of muscle lessening exercise group and control group are 30.83 and 27.16 respectively. The obtained F ratio of 11.01 for adjusted post-test mean is more than table value of 4.21 for df 1 and 27 require for significance at 0.05 level of confidence on self-confidence. The result of the study shows that there was significant difference between the adjusted post test mean of muscle lessening exercise group and control group on self-confidence.

#### Discussion on Finding

The results of the study indicates that the experimental group which underwent progressive muscle lessening exercise had shows significant improvement the selected dependent variables such as cognitive anxiety, somatic anxiety and self- confidence, when compared to the control group. The result of the study revealed that there was significant difference exists among female kabaddi players reference to the past studies on selected psychological variables such as cognitive anxiety, somatic anxiety and self-confidence respectively in accordance with Navaneethan (2010), (Soundara rajan (2012).

#### Conclusion

From the analysis of data, the following conclusions were drawn.

1. The experimental group female kabaddi players improved significantly in all the selected psychological variables such as cognitive anxiety, somatic anxiety and self-confidence.

2. The control group did not improve significantly in all the selected psychological variables such as cognitive anxiety, somatic anxiety and self-confidence.

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