

# ANALYSIS OF VARIATIONS IN TENSION: ANXIETY ON THE INFLUENCE OF SPEED TRAINING

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## ABSTRACT

*The purpose of this study was to find out the variations in the tension- anxiety on the influence of speed training during low and high intensities in male sprinters. The investigator selected a total of 60 male sprinters from Chennai city schools, who were apparently normal and healthy. The subjects were from the age of 16 to 18 years and were trained athletes who had participated in state and national level competitions. An initial test was conducted to the subjects on the psychological variable tension- anxiety. By using match, the pair technique, the subjects were divided into two equal groups namely Control Group and Experimental Group, based on the initial speed performance. The research design used in this study was equated group design. The speed training programme was scheduled for six days per week in the morning between 6.00 am and 8.00 am and in the evening between 4.00 pm and 6.00 pm. In every session the work out lasted approximately 1 hour and 30 minutes. The training was given under the direct supervision of the investigator. The Profile of Mood States Questionnaire were administered and responses were collected in the evening during 1st, 4th, 8th, 12th and 16th week of low and high intensity Speed Training. The collected data on tension – anxiety was statistically analyzed by using ANACOVA (Analysis of Covariance), after eight weeks of low and high intensity speed training. Since the 100mts sprint event demands a high level of gross motor behavior, the sprinters naturally tend to provoke additional more intense feeling of anxiety during high intensity training to meet the competition demands. Tension did not decrease during the training in sprinters and speculated that this reflected the stress of upcoming competition. It also indicated that sprinters benefit from elevated anxiety. Thus, in the present study the scores on Tension-Anxiety (TA) were increased as the training intensity increases from low to high.*

**Key words:** Tension, Anxiety, Speed training, Sprinters

## INTRODUCTION

In the present time sports have achieved such high levels of development that the physical, technical and tactical preparation of the strongest athletes in the world are approximately the same. The major the competition, the more stressful the sports become and the more important the psychological state of the athlete. In sports competition the sportsmen are directly involved physically and psychologically. Due to psychic factors the load during competition is much more than during training. Training and competition, therefore, are mutually interdependent. The present investigation is an effort by the investigator to understand the

psychological state tension- anxiety of male sprinters of age between 16 and 18 on the influence of speed training during low and high intensities which is an inherent factor for achievement in competitive sport. By this the investigator can highlight the changes in the psychological tension – anxiety and how it can affect both low and high intensities of speed training.

## **HYPOTHESIS**

There would be no significant difference between the pre-test and post-test scores of tensions-anxieties during low and high intensity speed training.

## **SIGNIFICANCE OF THE STUDY**

- The study may be helpful to the coaches and the physical education teachers to identify the mood swing and mood disturbances of athletes during low and high intensities of speed training.
- The findings of this study will enlighten the coaches and sports psychologists to identify the mental states of the athletes and start giving training in mental toughness skills and emotional intelligence as they develop physical skills and techniques.

## **METHODOLOGY**

The investigator selected a total of 60 male sprinters from Chennai city schools, who were apparently normal and healthy. The subjects were from the age of 16 to 18 years and were trained athletes who had participated in state and national level competitions. An initial test was conducted to the subjects on the psychological variable tension- anxiety. By using match, the pair technique, the subjects were divided into two equal groups namely Control Group and Experimental Group, based on the initial speed performance. The research design used in this study was equated group design. The speed training programme was scheduled for six days per week in the morning between 6.00 am and 8.00 am and in the evening between 4.00 pm and 6.00 pm. In every session the work out lasted approximately 1 hour and 30 min. The training was given under the direct supervision of the investigator. Proper warming up exercises were performed by the subjects individually prior to the training session. The Profile of Mood States Questionnaire were administered and responses were collected in the evening during 1st, 4th, 8th, 12th and 16th week of low and high intensity Speed Training. The collected data on tension – anxiety was statistically analyzed by using ANACOVA (Analysis of Covariance), after eight weeks of low and high intensity speed training.

## RESULT AND DISCUSSIONS

TABLE - I

## ANALYSIS OF COVARIANCE AND F-RATIO FOR THE DIFFERENCES AMONG THE FINAL ADJUSTED SUM OF SQUARES FOR TENSION – ANXIETY (TA)

Variable		Sources of Variance	df	Sum of Square	Mean Square	Obtained F - ratio
Tension- Anxiety (TA)	1st - 4th week	Between groups Within group	1 27	0.062741 6.445593	0.062741 0.238726	<b>0.262816</b>
	1st - 8th week	Between groups Within group	1 27	0.139626 12.06213	0.139626 0.446745	<b>0.31254</b>
	1st - 12th week	Between groups Within group	1 27	5.269817 31.80067	5.269817 1.177803	<b>4.474279*</b>
	1st - 16th week	Between groups Within group	1 27	11.04114 41.1487	11.04114 1.524026	<b>7.244719*</b>
	8th - 12th week	Between groups Within group	1 27	3.873656 21.99243	3.873656 0.814535	<b>4.755669*</b>
	8th - 16th week	Between groups Within group	1 27	9.070394 30.33513	9.070394 1.123523	<b>8.07317*</b>

\* Significant > .05 (4, 21)

As can be seen in Table I the least square comparisons of the adjusted post test scores of the psychological variable Tension – Anxiety (TA) were significant between Control Group and Experimental Group during 1st and 12th week, 1st and 16th week, 8th and 12th week, 8th and 16th week, hence the null hypothesis was rejected. A non-significance was obtained during 1st and 4th week and 1st and 8th week.

## MAJOR FINDINGS OF THE STUDY

Anxiety is typically viewed as feeling- a person's perception or appraisal of a situation. This indicates that the factor Tension – Anxiety (TA) increases as the intensity of exercise increases. In a study conducted by Oxendine (1970) on emotional arousal and motor performance, he suggested that sport tasks that require more powerful, gross-motor behaviors which is found in sprinting need markedly high level of anxiety to achieve the goal, sprinters should be more psyched up.

The results of the present study are in accordance with the study conducted by Raglin, Morgan, O'connor (2003) on changes in Mood States during training in female and male college swimmers. The results suggested that specific mood factors increase and decrease in accordance with alterations in training with the exception of tension, which does not decrease in response to reduction in training.

Since the 100mts sprint event demands a high level of gross motor behavior, the sprinters naturally tend to provoke additional more intense feeling of anxiety during high intensity training to meet the competition demands.

Tension did not decrease during the training in sprinters and speculated that this reflected the stress of upcoming competition. It also indicated that sprinters benefit from elevated anxiety. Thus, in the present study the scores on the psychological variable Tension-Anxiety (TA) were increased as the training intensity increases from low to high.

## CONCLUSION

It was concluded that psychological variable Tension – Anxiety showed significant improvement in experimental group than the control group as the intensity of training increases from low to high in Speed Training.

## REFERENCES

- Joseph B Oxendine (1970) Emotional Arousal and Motor Performance .Department of Health, Physical Education, and Recreation, Temple University, Philadelphia, Pennsylvania, Quest Volume 13, 1970 - Issue 1.
- Kamlesh M.L., (1995). Diagnosing incentive motivation in sports: A replicative study Journal of Physical Education and Sport Sciences, January p-38.
- Raglin J.S., Morgan W.P., and O'Connor P.J., (2003). Changes in Mood States during training in female and male college swimmers. International Journal of Sport Psychology, 12, 585-589.
- Richard H. Cox (1990). Sports Psychology: Concepts and applications: 2<sup>nd</sup> D.B.Dubyque W.M.C. Brown Publishers P – 194.
- Terry (1995). The efficacy of mood state profiling with elite Performers, A review and Synthesis. The Sport Psychologist 9, 309 – 320.