A STUDY ON ANXIETY REGULATION OF MALE CRICKETERS USING JACOBSON DEEP RELAXATION METHOD

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ABSTRACT

Sport in general has the potential for high levels of stress and anxiety . Cricket is a game of very complex actions .Performance of a cricketer is crucial to his own career and also for his team's success. Preparation is crucial in both the physical and mental arena. Anxiety is one mental factor which affects the performance of cricketers. If the perception of a cricketer about the challenge is greater than the perceived skill, it makes him feel anxious or worried that he may not be able to complete the task without pain or embarrassment, or possibly not complete the task at all. Practicing and employing a range of psychological strategies can be beneficial in anxiety management. To reduce the anxiety level of cricketers, the author used Jacobson Deep relaxation method .This paper discusses impact of Jacobson deep relaxation had on the regulation of anxiety Levels

Keywords: Cricket, Anxiety , Jacobson Deep relaxation, Progressive relaxation technique

1. INTRODUCTION

Anxiety is emotional experience (state-like, trait-like and meta-experience) and a component of psychological, biological and social state which can be described along five basic dimensions: form, content, intensity, context and time.

The cognitive state of anxiety is defined as an emotional response characterized by a subjective feeling of tension, apprehension, nervousness and worry associated with an arousal of the autonomic nervous system **(Spielberger, 1979b).** A temporary anxiety condition would then comprise two components: a mental (cognitive) **(Martens, Vealey, & Burton, 1990);** and heart rate, which is a physiological component corresponding to raised heart rate, shortness of breath, sweaty hands etc. Top-level cricketers need to be ready for constant change and change management. Coping with anxiety is the process of adapting with change. Potential gain and loss are behind all stress-induced emotional experiences **(Lazarus, 2000).**

Cricket is a game of complexity and the situations of a game keep changing now and then thereby affecting the performance. Basically it is found that at elite levels the difference between the margin to win and to lose a game is very thin and those who are able to hold their nerves, have clinched the game in their teams favour. On the contrary those cricketers who are affected by anxiety fail to finish the game and the need to study this phenomenon has generated lot of interest for researchers to do extensive research. Theories like "multidimensional anxiety theory of performance, "catastrophe model of anxiety and performance, and "individual zones of optimal functioning—IZOF," Cognitive Mental Emotions Somatic Physical Symptoms have stipulated the relationship between anxiety and performance. Regarding anxiety management, the best known are relaxation techniques which can be defined as through which individuals are able to reduce their muscle and psychological tension voluntarily.

We will discuss in this article the effect of Jacobson Progressive relaxation -a body scan starting at the head and finishing at the feet to detect localized muscle tensions

Jacobson Progressive Relaxations: The technique named "progressive relaxation" was developed by Edmund Jacobson, a Chicago physician, who first introduced it in his book **Progressive Relaxation, in 1929.** It is mental relaxation that causes body relaxation. The leading representative of this second group is "autogenic training." According to this method, mental relaxation results from body relaxation. This happens progressively, going from one muscle group to the next. The objective of the tightening and relaxing phases is to increase the individual's awareness of the difference between the presence and absence of muscle tension. Once the individual has developed his/her self observation capacity through practice, he or she will be able to eliminate unwanted tensions in the muscle groups, without having to tighten them beforehand. This is a technique that uses muscle contraction and relaxation to make you feel calmer. What is the purpose of the technique? Relaxation can help to relieve the symptoms of anxiety. Although the cause of the anxiety will not disappear, you will probably feel more able to deal with it once you have released the tension in your body and cleared your thoughts. Don't worry if you find it difficult to relax at first. It is a skill that needs to be learned and it will come with practice. Once you have mastered it you will be able to use it throughout your life, for example when driving a car, sitting in your office or standing in a supermarket queue. The improvement of relaxation skills allows athletes to reduce or increase their level of anxiety efficiently, in a shorter period of time, and without the need for a special site to facilitate the execution of the techniques.

The relaxation response, as well as the state of anxiety, can be evaluated through a questionnaire Two examples of scientifically validated questionnaires are the Revised

Competitive State Anxiety Inventory–2 (CSAI-2R), which measures cognitive anxiety, somatic anxiety and self confidence **(Janelle & Naugle, 2012).**

Mental health of the sportsperson is more influencing their performance. **(Sahni, 2017).** Mind and body are always well connected. The performance of a cricketer depends on both cognitive and physical factors. The intervention of some physical exercises or treatment also impact the mental behaviour. In this regard, the study is attempting to identify whether Jacobson deep muscle treatment has any influence over cricketers anxiety level. Main Objective of the study was to examine the impact of Jacobson progressive relaxation techniques on anxiety levels of cricketers.

2. METHODOLOGY

2.1 Selection of Subject

Two groups of each 8 cricketers were selected randomly and one group was assigned as the control group and the other group was assigned as the treatment group. The cricketers in the control group had received no treatment. They just proceeded as usual , whereas the treatment group were subjected to Jacobson Progressive Relaxation Technique for a period of 30 days.

The cricketers were initially classified into two groups namely control groups and treatment groups. Each group consists of eight members. The players in the treatment group received the Jacobson deep muscle relaxation treatment. The anxiety level of both the groups were measured before and after the treatment

2.2 Instrument

The research was conducted with a well structured questionnaire which consists of 5 point Likert scale questions.

3. RESULTS & DISCUSSION

The cricketers were initially classified into two groups namely control groups and treatment groups. Each group consists of eight members. The players in the treatment group received the Jacobson deep muscle relaxation treatment. The anxiety levels of both the groups were measured before and after the treatment.

TABLE 1
DESCRIPTIVE STATISTICS OF PRE-TEST AND POST-TEST OF CRICKETERS OF EXPERIMENT AND CONTROL GROUP

Test	Groups	N	M	SD
Pre-test	Experimental	8	20.8750	4.99821
	Control	8	20.6250	5.68048
	Total	16	20.7500	5.17043
Post-test	Experimental	8	16.0000	4.30946
	Control	8	21.5000	5.42481
	Total	16	18.7500	5.51966

From table 1 reveals that the mean value of anxiety level pre-treatment is 20.75 and the mean value of anxiety for both the control group and treatment group has no major difference as the mean values are 20.625 and 20.875 for control group and treatment group respectively. But when we look at the average level of anxiety between the two groups after treatment, we can find a major difference in the average anxiety level between the two groups. The average anxiety level of the control group is 21.5 which does not show a major difference. But the anxiety level of the treatment group shows a major difference in post treatment as the anxiety level drops to a 4.875 point from 20.875 to 16.00. The standard deviation value for all the items are low and it

indicates that the anxiety level of players in both the groups before and after treatment is concentrated around the mean.

TABLE 2
BOX'S TEST OF EQUALITY OF COVARIANCE MATRICES

Box's M	.421
F	.119
df1	3
df2	35280.000
Sig.	.949

Table 2 indicates that there is a difference in the average value of anxiety after the Jacobson deep muscle treatment given to the treatment group, it is mandatory to check whether there is any covariance that exists between the groups under study. The significance value of 0.949 from Box test of equality indicates that the null hypothesis is accepted. This ensures that the results of these models are highly acceptable and trustworthy as the groups under study have no co-variances.

TABLE 3
MULTIVARIATE TESTS

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Time	Pillai's Trace	.294	5.828[a]	1.0	14.0	.030	.294
	Wilks' Lambda	.706	5.828[a]	1.0	14.0	.030	.294
	Hotelling's Trace	.416	5.828[a]	1.0	14.0	.030	.294
	Roy's Largest Root	.416	5.828[a]	1.0	14.0	.030	.294
Time x Group	Pillai's Trace	.462	12.042[a]	1.0	14.0	.004	.462
	Wilks' Lambda	.538	12.042[a]	1.0	14.0	.004	.462
	Hotelling's Trace	.860	12.042[a]	1.0	14.0	.004	.462
	Roy's Largest Root	.860	12.042[a]	1.0	14.0	.004	.462

From Table 3, it is observed that, wilk's lambda in the second row where the results of groups are obtained after comparing the post and pre-treatment. The significance value of Wilks' Lambda in the multivariate analysis is 0.04 which is less than 0.05 which leads to the rejection of the null hypothesis. This indicates that anxiety level of players in the control group shows a notable difference before and after the Jacobson deep muscle treatment

TABLE 4
MAUCHLY'S TEST OF SPHERICITY [b]

Within Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon [a]		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Time	1.000	.000	0		1.000	1.000	1.000

Though the wilks' lambda showed that there exists a notable difference in the anxiety level of the groups, it is mandatory to check the variances between the groups. Hence, in Table 4, Mauchly's test of sphericity is conducted to know whether the rule of sphericity is followed or not when selecting the groups. As per our result, the significance value which is less than 0.05

indicates that the sphericity is violated. This indicates that the variances between all combinations of groups are not equal.

TABLE 5
TESTS OF WITHIN-SUBJECTS EFFECTS

Source		Sum of Squares	df	Mean Square	F	Sig.
Time	Sphericity Assumed	32.000	1	32.000	5.828	.030
	Greenhouse-Geisser	32.000	1.000	32.000	5.828	.030
	Huynh-Feldt	32.000	1.000	32.000	5.828	.030
	Lower-bound	32.000	1.000	32.000	5.828	.030
Time x Group	Sphericity Assumed	66.125	1	66.125	12.042	.004
	Greenhouse-Geisser	66.125	1.000	66.125	12.042	.004
	Huynh-Feldt	66.125	1.000	66.125	12.042	.004
	Lower-bound	66.125	1.000	66.125	12.042	.004
Error	Sphericity Assumed	76.875	14	5.491		
	Greenhouse-Geisser	76.875	14.000	5.491		
	Huynh-Feldt	76.875	14.000	5.491		
	Lower-bound	76.875	14.000	5.491		

It is clear from Table 5 that the significance value of 0.04(<0.05) across sphericity assumed in the second row of the below table indicates that the previous assumption about sphericity is invalid. It is because the significance level indicates that the means between groups is perfectly equal. Variance cannot be found if the means are perfectly equal.

TABLE 6
TESTS OF WITHIN-SUBJECTS CONTRASTS

Source	Time	Sum of Squares	df	Mean Square	F	Sig.
Time	Linear	32.000	1	32.000	5.828	.030
Time x Group	Linear	66.125	1	66.125	12.042	.004
Error(Time)	Linear	76.875	14	5.491		

The p-value in the Test of within subject's contrasts is 0.04 which indicates a significant difference in the level of anxiety between the groups after the Jacobson deep muscle treatment. The partial eta squared value for time is 0.294 and results after Jacobson deep muscle treatment is .462, which is twice as the previous one. This indicates that Jacobson deep muscle treatment decreases the anxiety level of the players. 66% of the change in anxiety level of the players is due to the Jacobson deep muscle treatment.

4. CONCLUSION

The anxiety level of cricketers being an important factor affecting their performance is influenced by many factors. Most important among them are the physical health and mental state. The anxiety level of cricketers is connected to physical health. The results of this study proved that the intervention of jacobson deep muscle treatment decreases the anxiety level of players. Hence, the cricketers should be given proper physical treatment to improve their cognition level which in turn leads to better performance.

REFERENCES

Janelle, C. M., & Naugle, K. M. (2012). Emotional reactivity. In G. Tenenbaum, R. C.Eklund, & A. Kamata (Eds.), Measurement in sport and exercise psychology, pp.333–348, Champaign, IL: Human Kinetics

Jacobsen, E. (1929). Progressive Relaxation. Oxford: University of Chicago Press.

Lazarus. Richard S. (2000), How Emotions Influence Performance in Competitive Sports. The Sport Psychologist, 14 : 229-252.

Martens, R., Vealey, R. S., & Burton, D. (1990). Competitive anxiety in sport. Champaign, IL: Human Kinetics.

Sahni, Manroy & Bhogal, Gurjit. (2017). Anxiety, depression and perceived sporting performance among professional cricket players. British Journal of Sports Medicine. bjsports-2017. 10.1136/bjsports-2017-097827.5.

Spielberger, C.D. (1979b). Preliminary manual for the State-Trait Personality Inventory (STPI). Unpublished manuscript, University of South Florida, Tampa.