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Effect of psychological skills training program on state and trait anxiety of soccer players

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Abstract
Purpose: The present study aimed to evaluate the effect of six weeks Psychological Skills Training (PST) Program on State and Trait Anxiety soccer players
Methods: For the purpose of the study sixty soccer players belong to Th.Birchandra Singh Football Academy (TBSFA), Imphal West, Manipur were selected purposively. Subjects were divided into experimental and controlled group (30 players in each group). The data was collected through the administration of the State and Trait Anxiety Inventory (STAI) by Spielberg for selected psychological variables.
Statistical analysis: To find out the significant effect of Psychological Skills Training Program on State and Trait Anxiety, ANCOVA for psychological variables was used and level of significance was set at 0.05.
Findings: It revealed that there was no significant effect of soccer players in Trait Anxiety those who underwent the PST program as compared to the players in controlled group and there was no significantly reduce of State Anxiety those who underwent the PST program as compared to the players in controlled group.

Keywords: Anxiety, state anxiety, trait anxiety

1. Introduction
For decades the elite athletes have enhanced the performance by exploiting advancements in systematic per iodization of training in various sports. Now, an important constituent of the training received by the elite performer has focused on the interplay between mental and Physical skills training. The potency of pursuing multiple training approaches for developing both physical and mental skills have been taken by sports trainers and coach.
Psychological skills training (PST) is the systematic training methods designed to enhance an athlete's performance, physical activity self-satisfaction and achieving greater sport Performance. The goal of psychological skills training (PST) is to help the sports person for the development of psychological skills, by enhancing their psychological skills.
PST is as important to the Soccer Players as other sports, and most successful elite's players used a combination of physical, psychological abilities, technical and tactical. Weinberg and Gould make an example that coaches attribute 50-90% of an athlete's success depending upon to their psychological skills (Hardy, Jones & Gould, 1997 [3]; Weinberg & Gould, 1999) [6].
Psychological Skill Training is an integral part of the athlete as other training components of sports training. 50-90% effort of their performance at main competition was contribute by the elite athletes through PST program. PST should be given and developed by the athletes as technical and tactical aspect of sports. Every individual or athletes has different needs in sports. So athletes must be trained systematically according to the individual need of players (Rosie chee, 2010) [1].

2. Methodology
2.1 Subjects
A total of sixty (n=60) soccer players male, who accepted voluntarily to be the part of the study, were selected as the subject from Th.Birchandra Singh Football Academy (TBSFA), Imphal West, Manipur. The subjects were ranging from 17 to 20 years.

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2.2 Criterion Measure

For the purpose of the study following criterion measures were used:

- For PST training program selected Psychological intervention namely Self- talk, relaxation techniques (PMR) and Breathing Technique was given as a training tool for 6 weeks.
- For assessing the Anxiety (State and Trait Anxiety), Anxiety (State Trait and Anxiety Inventory) (STAI) containing 40 items by Charles D. Spielberger was used.

2.3 Procedure

To achieve the objective of the study Psychological Skill Training Program was prepared in consultation with the supervisor and other experts. Before implementing the training program Rapport was developed with Players by visiting the Th. Birchandra Football Academy, Taobungkhok, Imphal West, Manipur to communicate and observe the Players. The subjects were divided randomly into two equal groups i.e. Experimental Group and Control Group. Experiment Group (n=30) and control group (n=30). Prior to the training program Pre-data was collected from both the groups. Six weeks PST program was given to the Experiments Group whereas Control group was following the normal physical and skill training given by Academy coach. The Psychological interventions used for the study were Self Talk, Breathing Technique, and Pulmonary Muscle Relaxation Technique. After the Successful Completion of the six weeks Psychological Skill training program post-data was collected.

2.4 Administration of the Psychological skills

Skill Development program: PST program in Pulmonary Relaxation Technique, Breathing Technique and self-talk was implemented in the form of 30 minutes session for three days in a weak.

Application and Evaluation: Selected Psychological intervention was imparted to Soccer Players for six weeks. First Soccer players (Experiment Group) were made aware of the Psychological Intervention and they started practice the techniques under the supervision of the head coach and researcher observed the training program. The data was collected at two stages, Pre-data i.e in the beginning before starting the PST Program and Post-data i.e after the completion of PST Program.

2.5 Statistical Technique

To find out the effect of training the following Statistical Procedure was adapted:

- Descriptive statistics was used.
- To analyze the effects of Psychological Skill Training Program ANCOVA was used.
- For testing the hypothesis the level of significance was set at 0.05 level.

3. Findings

Table 1: Descriptive Statistics of State Anxiety of Soccer Players

Dependent Variable: PST_SA			
GROUP	Mean	Std. Deviation	N
TREATMENT	41.0667	3.97348	30
CONTROL	38.6667	4.55111	30
Total	39.8667	4.40518	60

The above table reflects the mean value of the performance and number of Subjects in experimental and controlled groups, the mean value of all the Soccer players in mean of Experimental groups 41.0.6 ; SD is 3.97 (N=30), whereas Control group is 39.8; SD 4.55

Homogeneity of the group was tested by computing the levene's test of equality; the findings are presented in table No. 2.

Table 2: Levene's Test of Equality of Error Variances of State Anxiety

F	df1	df2	Sig.
.782	1	58	.380
Tests the null hypothesis that the error variance of the dependent variable is equal across groups.			
Design: Intercept + PRE_SA + GROUP.			

Output shows the result of Levene's test when pre PST program is included in the model as a covariate. The Levene's test is insignificant, indicating that the group variances are equal. Hence, the assumption of homogeneity of variance has been met. The findings with regard to ANCOVA are presented in table 3.

Table 3: Tests of Between-Subjects Effects of State Anxiety of Soccer Players

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	229.830[a]	2	114.915	7.158	.002	.201
Intercept	341.650	1	341.650	21.281	.000	.272
PRE_SA	143.430	1	143.430	8.934	.004	.135
GROUP	146.409	1	146.409	9.120	.004	.138
Error	915.103	57	16.054			
Total	96506.000	60				
Corrected Total	1144.933	59				
a. R Squared = .201 (Adjusted R Squared = .173)						

The above table shows the ANCOVA table with the covariate included. Looking first at the significance value of *Group* it is clear that the result of F-test support the effect after controlling for Pre performance, obtained F = 9.12 at p 0.04 < 0.05.

Table 4: Mean Difference between Experimental and Controlled Group

(I) GROUP	(J) GROUP	Mean Difference (I-J)	Std. Error	Sig.ª	95% Confidence Interval for Differenceª	
					Lower Bound	Upper Bound
TREATMENT	CONTROL	3.236*	1.072	.004	1.090	5.383
CONTROL	TREATMENT	-3.236*	1.072	.004	-5.383	-1.090
Based on estimated marginal means						
*. The mean difference is significant at the .05 level.						
a. Adjustment for multiple comparisons: Bonferroni.						

The above table exhibits that the mean difference among Experimental and Controlled group is 3.236, significant at .004< 0.05.

Table 5: Descriptive Statistics of Trait Anxiety of Soccer Players

Group	Mean	Std. Deviation	N
Treatment	37.7000	4.96991	30
Control	39.6333	3.79185	30
Total	38.6667	4.48979	60

The above table reflects the mean value of the performance and number of Subjects in experimental and controlled groups, the mean value of all the Soccer players in mean of Experimental groups 37.7; SD is 4.96 (N=30), whereas Control group is 39.6; SD 3.79.

Homogeneity of the group was tested by computing the levene's test of equality; the findings are presented in table No. 6

Table 6: Levene's Test of Equality of Error Variances

Dependent Variable: POST_Trait Anxiety			
F	df1	df2	Sig.
7.746	1	58	.007
Tests the null hypothesis that the error variance of the dependent variable is equal across groups.			
a. Design: Intercept + PRE_TA + GROUP			
a. Design: Intercept + PRE_TA + GROUP			

Output shows the result of Levene's test when pre PST program is included in the model as a covariate. The Levene's test is insignificant, indicating that the group variances are equal. Hence, the assumption of homogeneity of variance has been met. The findings with regard to ANCOVA are presented in table

Table 7: Tests of Between-Subjects Effects

Dependent Variable: POST_Trait Anxiety						
Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	707.775ª	2	353.888	41.888	.000	.595
Intercept	47.670	1	47.670	5.642	.021	.090
PRE_TA	651.709	1	651.709	77.140	.000	.575
GROUP	44.222	1	44.222	5.234	.026	.084
Error	481.558	57	8.448			
Total	90896.000	60				
Corrected Total	1189.333	59				
a. R Squared = .595 (Adjusted R Squared = .581)						

The above table shows the ANCOVA table with the covariate included. Looking first at the significance value of *Group* it is clear that the result of F-test support the effect after controlling for Pre performance, obtained F = 5.234 at p 0.26 > 0.05.

Table 8: Mean Difference between Experimental and Controlled Group

Pairwise Comparisons						
Dependent Variable: POST_Trait Anxiety						
(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.ᴬ	95% Confidence Interval for Differenceª	
					Lower Bound	Upper Bound
TREATMENT	CONTROL	1.999*	.874	.026	.249	3.749
CONTROL	TREATMENT	-1.999*	.874	.026	-3.749	-.249
Based on estimated marginal means						
*. The mean difference is non- significant at the .05 level.						
a. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).						

The above table exhibits that the mean difference among Experimental and Controlled group is 1.9999, in significant at 0.26>0.05.

4. Discussion

The Psychological intervention namely Self-talk, VMBR and Relaxation Technique used for the study has been mostly used by the many researchers for reducing the anxiety with a normal physical training. Athletes in experimental group experienced more significant enhancement to reduce the state anxiety after the intervention imparted to them as after compared to participants in the control group. Indeed, results show significant reduction of state anxiety and its shows that the implemented intervention technique that has been used for PST program meaningfully improves the participants to reduce the competition failure due to high anxiety before and during the competition. It is generally agreed that the best time to initiate a PST program is the off season or pre-season. In these time periods athletes have more time to learn and practice new skills, and also they do not have winning

pressure. This issue could be another reason for not reaching significant differences on anxiety.

In other hand current result also indicates insignificant differences in trait anxiety. The intervention results imply that experimental group did not have significantly decreases in trait anxiety from pre-test data to post test data. The reason for this result may be due to time duration of training program. According to Vary Cox (1998) the PST program must last minimum of three months to change some psychological skill and traits of participants. Another reason may be the participants age i.e. 17-20 years is not the specializing years to gain or developed the traits. According to the age ranging between 13-16 years is an specializing years.

Could not find significant decrease in anxiety levels of athletes. After the implementation of mental skills program on less than 19 years old athletes, findings of the study showed that there were no interpretable differences between groups' anxiety levels. In line with our hypothesis the results could be explained by the time between assessments may not have been long enough to allow subjects to perceive any changes in their trait anxiety. Moreover, implied their study to investigate the effect of psychological skill training techniques such as progressive muscle relaxation on anxiety. The results of that studies revealed that there was no significant difference in levels of anxiety among the male inter-collegiate volleyball players. The affect-reducing strategies of relaxation techniques may not be appropriate, especially during the limited time available during an intervention program.

5. Conclusions

After the examination of data in the present study it has been revealed that there was a significance improvement of State Anxiety and no significant was found in the Trait Anxiety following the PST program. The results of the current study with regard to the non-significant decrease in anxiety have been indicated by various researches. Same findings of those studies with current study could be explained by durations of the practices and not having ability about modifying perceptions of athletes.

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