Impact of Mental Skills Training on Coping Skills of Soccer Players

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Abstract – This study aim was to analyze impact of mental skills training on coping skills of soccer players. A sample of 20 male soccer players with age group 18 to 24 years from LNIPE, NERC Guwahati were purposively selected and all the subjects were divided randomly into two groups, each group consisting of 10 subjects. Treatment group under gone mental skill training for the duration of 10 weeks 03 times a week whereas control group was not allowed to participate in any training programme except their daily routine.

Athletic Coping Style Inventory (ACSI-28; Smith, Schutz, Smoll, & Ptacek, 1995) was used to assess individual coping skills and data was taken at the beginning and after the end of training program. Descriptive statistics, Analysis of Covariance as statistical techniques were employed. Further Bonferroni post hoc means comparison was also used when F value was found significant. The main effect for the treatment groups were significant at 5% level for confidence & achievement motivation; F=40.22, p=0.00, p<0.05 with effect size .703, for coachability; F=35.89, p=0.00, p<0.05 with effect size .679), for Coping with adversity; F=23.03, p=0.00, p<0.05 with effect size .575) and for freedom from worry; F=46.74, p=0.00, p<0.05 with effect size .733) it indicates that there was significant differences between the groups after adjusting the effect of pre-test.

Post hoc results showed that significant difference was found between treatment and control group in confidence & achievement motivation, coachability, coping with adversity and freedom from worry at 0.05 level of significance.

Key Words: Mental Skill Training, Coping Skills and Soccer Players

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INTRODUCTION

Coping Skills is an effort of mental, emotional and behavioral to cope with external and internal demands for stressful situations such as sports performance during competition (Crocker, Kowalski & Graham, 1998). A central pattern which emphasis the application of applied sport psychology which comprises mental skills training. Coping skill helps athletes to control their emotions and handle tough situations during competition, athletes gradually improves skills for handling tough situations (Reese, 2005). Development of coping skills has become necessity for achieving high performance in modern competition. Athletic coping skills inventory-28 constructed by (Smith, Schutz, Smoll & Ptacek, 1995) was used for assessing coping skills of athletes. Studies on the capability of coping skills stated that skilled sportsman have higher ways in controlling painful situations, excellent skill for improving greater performance in sports (Cresswell& Hodge, 2001; Dugdale, Eklund& Gordon, 2002; Haney & Long, 1995). These studies showed that many athletes benefited to great success with the use of coping skill

and also attracted more research to conduct for the betterment of sporting performance. Studying the coping level of athletes is beneficial for coaches, physical education teachers and trainers to know the merits and de-merits coping ways of their players. This way athletes can benefited to enhance guided coping involvements (Folkman & Mostowitz, 2004). Research studies proved that to handle stressful situations peacefully and giving extra ordinary performance in competition coping skills are essential prerequisite of athletes. Therefore this study aim was to analyze impact of mental skills training on coping skills of soccer players.

METHOD & MATERIALS:

Twenty (20) male soccer players with age group 18 to 24 years from LNIPE, NERC Guwahati were purposively selected and all the subjects were divided randomly into two groups, each group had 10 subjects. Treatment group under gone mental skill training for the duration of 10 weeks 03 times per week whereas control group was not involved in any training programme except their daily routine. Athletic

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Coping Style Inventory (ACSI-28; Smith, Schutz, Smoll, & Ptacek, 1995) was used to assess individual coping skills and data were taken at the beginning and after the end of training program.

Athletic Coping Style Inventory consist 28 questions and describing seven sport-specific sub dimensions: Coping with Adversity (4 items), Peaking Under Pressure (4), Goal Setting/Mental Preparation (4), Concentration (4), Freedom from Worry (4), Confidence and Achievement Motivation (4), and Coachability (4).

Players rated their experiences on each question such as 0 = Almost Never, 1 = Sometimes, 2 = Often, 3 = Almost Always a 4-point scale. Sum of sub dimensions scores range from 0 to 12 on each subscale, higher the scores better will be that subscale. The sum of scores for all sub dimensions range 0 to 84, overall higher scores indicate better coping strategy.

To analyze data descriptive statistics and the analysis of co-variance at 0.05 level of significance was applied. In case of F- value significant Bonferroni post hoc means comparison was used.

RESULTS:

The data collected was analyzed by using descriptive statistics and scores of post mean of sub-dimensions of coping skills of soccer players is presented in table-1.

Table 1

DESCRIPTIVE STATISTICS OF SUB-DIMENSIONS OF COPING SKILLS IN POST TESTING OF SOCCER PLAYERS

Sub-dimensions of Coping skills	Group	Mean	Std. Deviation	N
Goal setting or Mental preparation	Treatment Group	7.90	.99	10
	Control Group	7.40	1.42	10
Confidence and achievement motivation	Treatment Group	9.10	1.29	10
	Control Group	6.80	1.03	10
Coachability	Treatment Group	8.70	1.42	10
	Control Group	6.20	1.14	10
Concentration	Treatment Group	6.70	1.16	10
	Control Group	6.90	1.10	10
Coping with adversity	Treatment Group	7.90	1.10	10
	Control Group	6.90	1.52	10
Peaking under pressure	Treatment Group	6.90	1.66	10
	Control Group	6.20	1.14	10
Freedom from worry	Treatment Group	9.60	1.07	10
	Control Group	5.20	1.47	10

Table 1 depicts that the original post mean of soccer players for sub-dimensions of coping skills. It is very clear from the above table that means value of freedom from worry was found highest and means value of concentration was found lowest among all the sub-dimensions of coping skills. None of the sub-dimensions of coping skills mean value was found greater than 10. It is considered by experts that cut off range for each sub-dimension is 10 therefore any player who scored less than 10 on any sub-

dimension, need to pay more attention for improving coping skills.

Descriptive statistics and scores of adjusted post mean of sub-dimensions of coping skills is presented in table-2.

Table 2

ADJUSTED MEAN AND STANDARD ERROR OF SUB-DIMENSIONS OF COPING SKILLS OF TREATMENT AND CONTROL GROUP IN POST TESTING

Goal setting or Mental preparation	Treatment Group	7.900[a]	.280
	Control Group	7.400[a]	.280
Confidence and achievement motivation	Treatment Group	8.956[a]	.223
	Control Group	6.944[a]	.223
Coachability	Treatment Group	8.856[a]	.329
	Control Group	6.044[a]	.329
Concentration	Treatment Group	6.835[a]	.355
	Control Group	6.765[a]	.355
Coping with adversity	Treatment Group	8.330[a]	.264
	Control Group	6.470[a]	.264
Peaking under pressure	Treatment Group	7.038[a]	.471
	Control Group	6.062[a]	.471
Freedom from worry	Treatment Group	9.036a	.314
	Control Group	5.764a	.314

a. Covariates appearing in the model are evaluated at the following values: Pre Coachability = 6.10, Pre concentration = 7.0, Pre coping = 6.5, Pre confidence = 6.7, Pre goal setting = 6.6, Pre peaking = 6.1, Pre freedom = 6.1.

The above table indicates the new adjusted post mean values for the treatment groups after nullifying the effect of initial difference among the treatment groups. It can be still seen that mean value of freedom from worry was found highest and mean value of concentration was found lowest among all the sub-dimensions of coping skills.

Analysis of covariance was used to find out the significant difference between treatment & control group after eliminating the effects of covariate is presented in table-3.

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Table 3

ANCOVA POST TEST RESULTS FOR SUB-DIMENSIONS OF COPING SKILLS

Sub-dimensions of Athletic Coping Skills	Source	Sum of Squares	df	Mean Square	F	Sig.	Effect Size
Goal setting or Mental preparation	Pre	13.96	1	13.96	17.79	.001	.511
	Treatment	1.25	1	1.250	1.59	.224	.086
Confidence and achievement motivation	Pre	16.17	1	16.17	32.97	.000	.660
	Treatment	19.72	1	19.72	40.22	.000	.703
Coachability	Pre	11.72	1	11.72	11.08	.004	.395
	Treatment	37.97	1	37.97	35.89	.000	.679
Concentration	Pre	2.88	1	2.88	2.45	.137	.125
	Treatment	.02	1	.02	.02	.893	.001
Coping with adversity	Pre	20.94	1	20.94	32.79	.000	.659
	Treatment	14.71	1	14.71	23.03	.000	.575
Peaking under pressure	Pre	2.04	1	2.04	1.01	.329	.056
	Treatment	4.02	1	4.02	1.99	.177	.104
Freedom from worry	Pre	16.05	1	16.05	19.55	.000	.535
	Treatment	38.37	1	38.37	46.74	.000	.733

In the above table, it is seen that the significant values of the variables pre goal setting, confidence & achievement motivation, coachability, coping with adversity and freedom from worry are significant are significant at 0.05 level of significant ($p < 0.05$). So it can be concluded that initially in these variables there were significant difference in the groups which might affect the main effect of the study. In that case, ANCOVA is the appropriate test to compare the two groups.

Main effect for the treatment groups were significant for confidence & achievement motivation; F=40.22, p=0.00, p<0.05 with effect size .703, for coachability; F=35.89, p=0.00, p<0.05 with effect size .679), for Coping with adversity; F=23.03, p=0.00, p<0.05 with effect size .575) and for freedom from worry; F=46.74, p=0.00, p<0.05 with effect size .733) it indicates that there was statistically significant differences between the groups after adjusting the effect of pre-test.

It is also seen in the above table that significant values of the variables goal setting; F= 1.59, concentration F= 0.02 and peaking under pressure F= 4.02 are insignificant at 0.05 level of significant (p>0.05). So it indicates that there was no significant effect of training on these variables.

As the calculated 'F' value was found to be significant in confidence & achievement motivation, coachability, coping with adversity and freedom from worry at 5% level a post hoc comparison test was applied by using Bonferroni test. The result post hoc test is shown in table-4.

Table 4

PAIR WISE COMPARISON OF MEAN FOR SUB-DIMENSIONS OF COPING SKILLS BETWEEN TREATMENT GROUP AND CONTROL GROUP
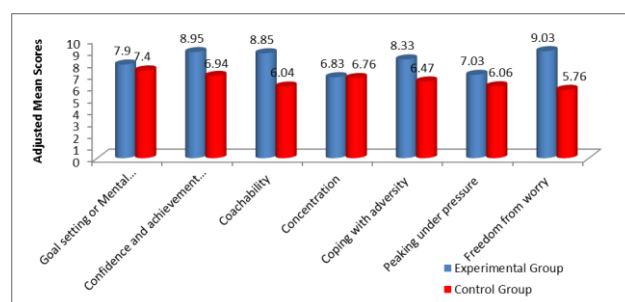
Sub-dimensions of Coping Skills	(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.b
Confidence and achievement motivation	Treatment	Control	2.011*	.317	.000
Coachability	Treatment	Control	2.813*	.469	.000
Coping with adversity	Treatment	Control	1.861*	.388	.000
Freedom from worry	Treatment	Control	3.273*	.479	000

* Significant at 0.05 level of significance
b. Adjustment for multiple comparisons: Bonferroni.

Since the F value in the ANCOVA result table is significant, a pair wise comparison of means has been made by using the Bonferroni method. The result is displayed in the above table. It can be seen that the p value associated with the mean difference in confidence & achievement motivation, coachability, coping with adversity and freedom from worry between treatment and control group is 0.00 hence the difference is significant at significant level of 0.05 (p<0.05). The difference between the treatment and control group 2.011 for confidence & achievement motivation, for coachability 2.813, for coping with adversity 1.861 and for freedom from worry 3.273 are positive that means treatment group is having higher score compared to the control group. It is also clear from above table that significant improvement was seen highest in freedom from worry as mean difference was higher between treatment and control group in comparison to other sub-dimensions of coping skills.

The graphical representation of adjusted post-group means of treatment group and control group for sub-dimensions of coping skills are presented in Figure-1.

Figure-1: Graphical Comparison of the Adjusted Post-group Means of Treatment Group and Control Group of sub-dimensions of Coping Skills

DISCUSSION:

This study aim was to analyze impact of mental skills training on coping skills of soccer players. The finding of study showed that mental skill training significantly improved the confidence & achievement motivation, coachability, coping with adversity and freedom from

worry of soccer players after the duration of ten (10) weeks of training whereas no significant difference was found in goal setting, concentration, and peaking under pressure in treatment group. Therefore mental skill training was found effective to improve confidence & achievement motivation, coachability, coping with adversity and freedom from worry.

It may be attributed due to the fact that Mental Skill training utilizes the body's natural relaxation response to counteract unwanted mental and physical symptoms. It consists of six standard exercises that make the body feel warm, heavy, and relaxed. Players practiced mental skill training and for the purpose of practice they sit on a chair in comfortable position and focus without any goal, and then use visual imagination and verbal cues to relax the body in some specific way. This way they tried to develop a connection between the mind and body, allowing athlete to influence body reactions that cannot normally be controlled, such as blood pressure, heartbeat, and body temperature.

This training enables the mind & body to switch off the fight/flight/freeze stress response which leads to proper recovery and relaxation of body. It involves self-regulation process to support and facilitate the natural self-healing mechanisms that already exist in our body. The emphasis is not to control these natural healing systems, but rather to use their intrinsic potentials more fully. Autogenic Training is initiated with the relaxation of upper & lower limbs through heaviness & warmth sensations then control of breathing to placed attention on upper & lower abdomen, concentration of calm heartbeat and finally coolness in forehead.

Athletes, who aspire to achieve success, are obligated to have the capacity to cope with stressors (Nicholls & Polman, 2007). Harwood, Cumming, and Fletcher (2004) found that high task/moderate ego oriented athletes (in terms of achievement goal orientations) used more imagery, goal setting, and positive self talk as compared to low task/high ego- and moderate task/ low ego-oriented athletes. Finding indicates that athletes who define success as mastering skills and improving incorporate mental training as part of their skill development more than athletes who focus more on comparison with others. Imagery training is effective in enhancing athletes' performance on sport skills (Feltz & Landers, 1983; Morris et al., 2005). Imagery has been shown to be effective in enhancing self-confidence (Callow, Hardy, & Hall, 2001; Evans et al., 2004 & Short et al., 2002), motivation (K. A. Martin & Hall, 1995), attentional control (Calmels, Berthoumieux, & d'Arripe-Longueville, 2004), and visual search abilities (Jordet, 2005) of athletes during competition. Mental Skill training preparation led to consistent peak performance in competitions and contributes to fast recovery of strength and elimination of symptoms of stress and restlessness.

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