
MENTAL CONDITIONING FOR PERFORMANCE ENHANCEMENT: ASSESSING THE IMPACT OF PSYCHOLOGICAL SKILL TRAINING AMONG FOOTBALL PLAYERS

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Abstract

Background: In contemporary football, there are constantly growing psychological pressures on the player as a result of the increased competition, pressures to perform, and to remain mentally strong in critical situations during matches. Psychological Skill Training (PST) is well known for its organised approach to mental skills that can have a beneficial impact on these factors and improve overall performance preparedness.

Purpose: The study aims to evaluate the effectiveness of Psychological Skill training among the men football players on key Psychological attributes especially during the pre-competitive phase.

Methods: 20 men football players aged between 18 to 25 were selected to accomplish the study. The chosen participants were engaged in a 6-week psychological skill training which comprised self-talk, imagery techniques, goal setting, and biofeedback strategies. Prominent psychological parameters, namely Self-confidence, Mental Toughness, and Group cohesion were enlisted for this study and they were assessed before and after the PST intervention. The collected scores from the participants were statistically analysed by using descriptive and paired T-test statistics methods.

Results: The final findings revealed that PST significantly developed psychological variables, namely Self-confidence, Mental Toughness, and Group cohesion, which denotes its potential as an effective pre-competitive intervention for enhancing psychological traits. The findings have implications for future training practices and can be used to maximize performance among football players and other athletes.

Keywords: Football players, Psychological demand, PST, Optimal performance.

1. INTRODUCTION

A growing number of athletes are turning to Psychological Skills Training (PST) to develop their mental skills, which leads to peak performance [1]. Most professionals have gained insight into the role of psychology in football which they use to boost performance [2]. The significance of psychological factors in determining athletic success has gained considerable attention in recent years. Sport athletes can improve their performance by developing a set of trainable psychological capabilities known as psychological skills [3]. Self-confidence, mental toughness, and group cohesion are some of the psychological attributes that can be enhanced through the cognitive-behavioral techniques that comprise PST. Visualization, goal-setting, self-talk, and relaxation techniques are all part of this group of approaches [4, 5]. Multiple studies have indicated that successful athletes tend to exhibit higher self-confidence, engage in more task-focused thinking, experience lower levels of anxiety, and make greater use of positive imagery and self-talk compared to their less successful peers [6].

Football is a highly competitive team sport that is played globally and, on many levels, is extremely demanding physically, tactically, and psychologically. Teams of professional footballers experience competitive stress, performance pressure, and social team dynamics every day, and all that needs to be built on a solid psychological resilience platform [7]. With the intensity of the game and the high levels of visibility among the crowds, the pressure placed on a coach to perform, and the expectations of the fans, high levels of competition daily, mental preparation became just as important as physical training [8]. Cognitive abilities are on an equal footing or even more influential than technical or tactical actions in the game of football because a constantly tumbling requirement on dynamic and quickly evolving demands emphasizes the necessity of continuous complex decision-making [9]. Mental training equips the athletes with the required psychological skills to facilitate proper handling of challenges in their line of competition [10], so in this context, Psychological Skills Training (PST) has gained recognition as an effective method for enhancing mental skills that support optimal performance [11], as well as for developing psychological techniques and resources to manage sports practice effectively [12].

Self-confidence is both a personality trait and a psychological state [13]. Self-confidence is a core attribute that enables an athlete to believe in their ability to succeed in a specific situation. It is a key predictor of successful sports performance, where it helps perform well in high-stakes circumstances [14]. Self-confidence allows the athlete to believe in their potential and abilities in the course of high-pressure situations during the gameplay in high-intensity game like football [15]. It is an invisible force which acts as the mental backbone that allows the players to take risks, express creativity on the pitch, and stay calm and composure at choking. Self-confidence not only offers individuals for better performance but also inspires their teammates to create positive energy to play better together [16]. Growing literature confirms the positive effect of PST on Self-confidence.

Among the most significant psychological traits associated with results and performance in elite sports, mental toughness has been repeatedly identified by athletes, coaches, and applied sports psychologists [17]. According to Gucciardi et al., Mental toughness is associated with sports awareness, challenge, and the drive to succeed [18]. This concept is also defined as the ability to recover from failure or take up challenges and pursue a goal despite difficulties [11]. The peak of mental toughness at the pre-competition stage is quite significant to guarantee the elite performance of athletes because they are exposed to factors of internal (fear of failure) and external pressure (media attention). High mental toughness can make athletes persevere and be confident and consistent in their contests. According to the systematic review conducted by Cowden (2017), a study met the analysis with about 90 percent positivity, indicating the correlation between mental toughness and athletic performance [19]. It is worthwhile noting that psychological treatments have proved to be highly effective when it comes to improving mental toughness in professional football players [20].

Group cohesion, or the feeling of belonging and commitment of a team is fundamental to success in team games such as football. Cohesion is related to the creation of trust, communication, and group efficacy that directly influence the performance and satisfaction levels of teams [21]. A cohesive team reflects better communication, support for each other, and dedication towards a target which is very essential when it comes to team games such as football. According to Studies, PST not only positively affects individual psychological states but it also helps to establish greater team cohesion. Group goal setting, communication training, and collective visualization are other methods to reinforce interpersonal relationships, fostering an atmosphere of cooperation within a team [22]. In a research conducted by Espada-Mateos et al., football teams that utilised normal PST sessions were reported to have a higher level of task cohesion and social cohesion in comparison with football teams that did not use such practices [23].

The pre-competition phase represents a challenge and opportunity set of its own to the football players and coaches. In this period, psychological preparation will take center stage as important as physical and technical preparation. The implementation of PST as a primary aspect of pre-competition training is indicative of an emerging trend in the development of an athlete. The introduction of PST in elite football training does not come as an addition but as a vital component. As sporting competition has become mentally more challenging, the incorporation of structured mental training programs into their daily routine has seen to it that the players are not only physically but also mentally prepared to contend with the stresses of competitive elite sporting play. The increase in self-confidence,

mental strength, and group cohesion that is attained via PST translates to an increase in individual performance and the development of more successful and resilient teams. Therefore, the objective of the study was to analyze the impact of PST on the psychological attributes of elite footballers during the pre-competitive period.

2. METHODS AND PARTICIPANTS

The study was practically carried out as a single-group pre-test and post-test examination to assess the influence of PST on the psychological parameters that have been chosen in the football player population in the pre-competition stage. The PST treatment involved a 6-week structured program. The study employed a purposive sampling method to pick a sample size of 20 male football players that had a range of 18-25 years (21.2 ± 2.1), height of 165-185 cm (174.4 ± 6.3), and weight of 60-82 kg (71.1 ± 7.5) from SRM Institute of Science and Technology, Tamilnadu, India. All the chosen participants possessed a minimum experience of seven years. Informed consent was collected from all the participants.

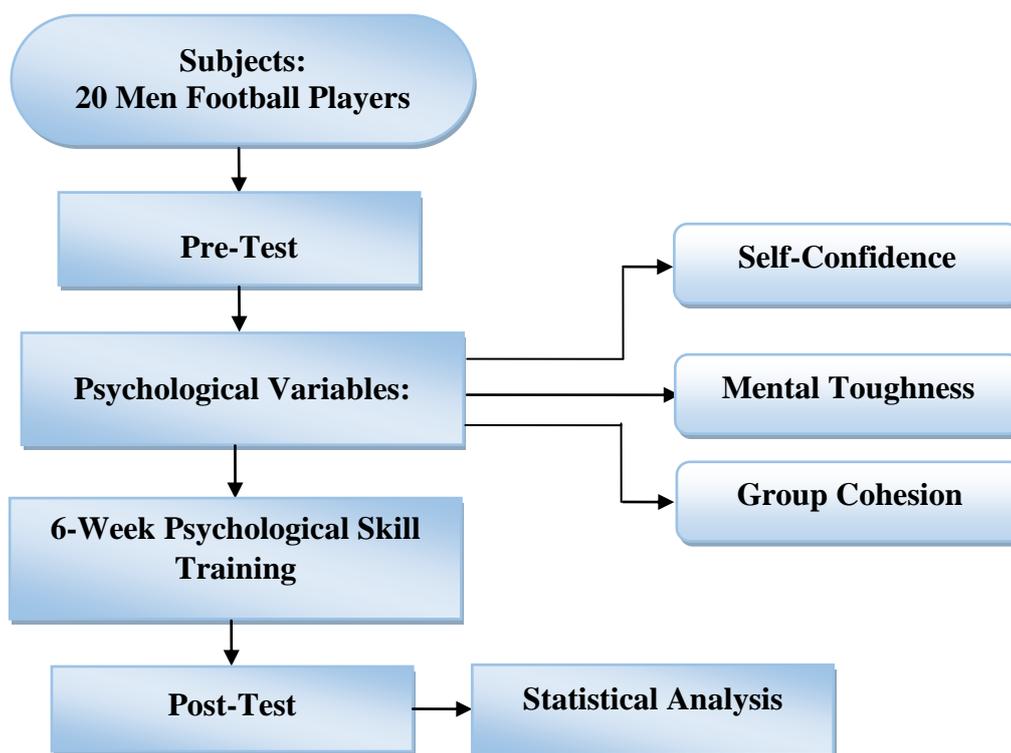


Figure 1. Represents the study's procedure

Figure I depicts the study protocol structure, which highlights the key steps of the research process, with participant selection, recruiting participants, pre-test assessment of chosen parameters, 6 weeks of interventions using psychological techniques, and a post-test to assess selected psychological factors. The collected data was statistically analysed to assess the significance of the training impact.

Outcome Measures

Psychological parameters were evaluated in this study, namely self-confidence (Trait sports confidence inventory), mental toughness (Sports mental toughness questionnaire-14), and group cohesion (Group environment questionnaire). The six-week intervention period was taken to measure all the psychological variables before and after the training program. The researcher provided close supervision over the whole testing process to maintain the safety as well as well-being of the participants.

Self-Confidence

The investigator measured the self-confidence of athletes in a sports situation with the help of the Trait Sports Confidence Inventory (TSCI) in a standard procedure of administration. The participants were briefed about the testing procedure and provided informed consent before the test. The TSCI contains 13 items that measure the levels of self-confidence possessed by an athlete in a competitive set-up. Participants respond to each of the statements, indicating how they tend to feel when they are competing. The TSCI has proven to be very reliable with previous

studies showing a Cronbach alpha of 0.86-0.94. The inventory was done in a quiet environment in order to reduce distractions.

Mental Toughness

To evaluate mental stability and psychological resilience to perform, the Sports Mental Toughness Questionnaire (SMTQ-14) was used. The questionnaire comprises 14 items, and every statement was measured using a 4-point Likert scale whereby ranging in the degree of veracity that the statement holds about an athlete. The participants filled out the questionnaire in a quiet environment, on their own. The SMTQ has found a proven tool for measuring Sports mental toughness with Cronbach’s alpha values ranging from 0.69-0.84.

Group Cohesion

The Group Environment Questionnaire (GEQ) was the chosen metric of team cohesion, as it reflects the perceptions the athletes hold over the cohesiveness of the group and the interpersonal relations involved. GEQ has 18 questions, and respondents in the survey used the 9-point Likert scale. The GEQ is a well-established tool in team sports undertakings and has proven to have Cronbach’s alpha often reported to be between 0.71 and 0.85.

Intervention Procedure

The Psychological Skill training spanned 6 weeks and consisted of three alternative days per week, each lasting around 50 minutes. The intervention was developed to systematically improve athletes’ self-confidence, mental toughness, and team cohesion. The training focused on four main techniques which included self-talk, imagery, goal-setting, and biofeedback. The first 2-week structured with self-talk about learning to recognize and substitute negative thoughts was taught to the athletes followed by the guided imagery sessions, whereby the athletes were able to rehearse successful performance and challenging situations. In the next two weeks, a goal-setting mechanism was implemented to enable the athletes to establish particular, measurable, and achievable mental and team goals. The last two weeks, there was a biofeedback exercise aiming at improving the perception and regulation of biological responses. Such psychological means were exercised in a controlled indoor environment and were to develop confidence, mental toughness, and team cohesion. All these mental trainings were conducted before the football training practices, focusing on avoiding the fatigue of the training effect.

Data Collection

The pre-test was administered before the start of the intervention, and the post-test was administered after the conclusion of the session. To ensure validity and reliability, data collection was conducted using the same equipment, in the same location, and according to the same methodology.

Statistical Analysis

The effectiveness of Psychological skills on Self-confidence, Mental Toughness, and Group cohesion was analysed using descriptive statistics and paired sample T-test, comparing pre- and post-training scores among the participants. SPSS software (Version 27) was employed for statistical analysis, and $p < 0.05$ was the significance level.

3. RESULTS

Table 1. Shows the pre- and post-intervention of the experimental group

Variables	Test	Mean	Std. Dev	Paired Differences										
				Mean	Std. Dev	Standard Error	95% Confidence Interval of the Difference		t	Sig. (2-tailed)				
							Upper	Lower						
Self Confidence	Pre	74.0500	3.20321	4.00000	1.74718	-	4.81770	-	3.18230	-	10.239	-	.000	
	Post	78.0500	2.70429											
Mental Toughness	Pre	36.7500	2.26820	3.50000	2.72416	-	4.77495	-	2.22505	-	-5.746	-5.746	.000	
	Post	40.2500	3.43166											
Team Cohesion	Pre	25.5500	3.03445	3.50000	1.31789	-	4.11679	-	2.88321	-	-	11.877	11.877	.000
	Post	29.0500	2.37254											

Table 1 shows the pre- and post-intervention of the experimental group. The mean score in self-confidence grew up to the pre-test result of 74.05 (± 3.20) and the post-test result of 78.05 (± 2.70). The average difference was found to be -4.00 and the standard deviation of 1.75. Paired samples t-test showed that there was a significant increase in self-confidence, $t(df) = -10.239$, $p < .001$. The 95% confidence interval for the difference ranged from -4.82 to -3.18, which implies that there was a positive and statistically significant effect of the intervention.

The participants' mean value scores on mental toughness increased from the pre-test (36.75 ± 2.27) to the post-test (40.25 ± 3.43). The standard deviation was 2.72 and the mean difference was -3.50. The outcome was statistically significant, $t(df) = -5.746$, $p < .001$, with a 95% confidence interval of the difference between -4.77 and -2.23. These results denote a significant gain in mental toughness after the treatment.

Finally, the score of team cohesion showed a substantial difference in the pre-test mean of 25.55 (± 3.03) to that of the post-test 29.05 (± 2.37). The main difference of -3.50 ($SD = 1.32$) rendered the t-value of -11.877 which was absolutely significant ($p < .001$). The intervention had a significant positive impact on team cohesion, as evidenced by the 95% confidence interval for the mean difference, which varied from -4.12 to -2.88.

4. DISCUSSION

The main conclusion of the current study was that psychological skills training (PST) increased the self-confidence, mental toughness, and group cohesion of the concerned participants considerably. The self-talk with goal setting, guided imagery and biofeedback method used in an intervention program of 6 weeks led to a significant increase in all three psychological measures. Results obtained in the study are consistent with past evidence performed during the last decade since an increasing number of studies indicate that PST improves psychological characteristics associated with personal and collective sports effectiveness.

Regarding self-confidence, the present evidence is confirmed by research by Ajilchi et al., who suggested that confidence and psychological well-being in women athletes improved significantly after participating in a seven-week mindfulness-based PST program [24]. Similarly, Heydari et al. conducted a research study on an 8-week PST program that led to significant improvements in state confidence and trait self-confidence among adolescent volleyball players [25]. Amar, B., & Chéour, F., demonstrated that 12 weeks (36 sessions) of self-talk and mental training programs effectively enhanced self-confidence in male kickboxers [26]. Similarly, Aulia et al, organised a study on the effectiveness of self-talk in increased confidence, along with emotional regulation and achievement motivation. So, the importance of PST as a tool that can be used to help athletes believe in what they can do, rather than focusing on the aspect that confidence is a rather fixed element, which can only be acquired through timely psychological practice. Such outcomes support the findings of the current research as they also showed significant increases in the levels of confidence among athletes who were exposed to PST techniques regularly.

Concerning the mental toughness variable, our results are similar to those obtained by Miçoogullari BO, Ekmekçi R, who applied a structured PST program in professional football players and showed significant changes in the mental toughness scores along with a positive relation with psychological well-being [27]. Accordingly, in another study, a mental skills training program administered to college athletes in six sessions led to high increases in mental toughness, immediately after the intervention [28]. Adding more credence to these findings, results of longitudinal monitoring of futsal national league players occurred in a ten-session PST and mindfulness-based intervention, which showed medium-to-great enhancement in mental obdurateness and coping skills [29]. Furthermore, the results of the studies conducted during the short-term mental skills training programs, in which self-talk, positive thinking, thought stoppage, and relaxation were found to be effective in raising the mental toughness and confidence of the participants [30]. These outcomes are consistent down the line throughout various populations and sports disciplines, further strengthening the arguments of the proposed study that experienced a large and significant increase in the scores of mental toughness following PST.

The current findings also conform with an emerging evidence base as far as group cohesion is concerned. A study stated that team-building programs involving PST strategies including group goal setting, group communications exercises, and role clarification have shown special success in improving tasks and team cohesion. Meta-analyses show that, compared to other interventions, they are most effective in task cohesion (focus on team objectives) and less effective in social cohesion (interpersonal relationships) and that their strongest effects are detectable when the activities are goal-oriented and a collective focus is used [31]. In addition, in a seven-month PST program of a men's soccer team, it turned out that the experimental group exhibited higher levels of cohesion throughout the season [32]. These observations are close to what we have found in our study, whose improved group cohesion was probably a result of PST interventions.

Collectively, the conclusions of the present study coincide with other previous research reported in the literature that suggests that psychological skills training is an effective medium not only in the individual psychological reinforcement alone but also in reinforcing interpersonal and team-based dynamics. These observed gains in self-confidence, mental toughness, and group cohesion reflect similar gains that are observed in other studies in various different sports, age levels, and competitive levels. The inclusion of several components of PST, particularly those that focus on cognitive and emotional control appears to be key in facilitating these results.

Irrespective of the positive results, there are a number of shortcomings to this study that should not be ignored. First, it had a single-group pre-post study design that did not use a control group. Second, the sample size was small and, therefore, constrained the value of the findings. It is also possible that it constrained the statistical power to identify smaller effects. Lastly, the intervention lasted just six weeks, which was not long enough to translate into long-term psychological changes. Future studies ought to incorporate randomized controlled studies with larger sample sizes, lengthier runs of intervention, and follow-up outcomes to ensure the continued success of PST.

5. CONCLUSION

The study presents the benefits of Psychological Skills Training (PST) as an effective mental conditioning intervention in the men's football pre-competitive process. The results have suggested that PST had an immensely positive influence on the crucial psychological variables such as self-confidence, mental toughness, and group cohesion that are important in optimal performance and team dynamics in competitive environments. The formulated intervention with elements of self-talk, goal setting, imagery, and biofeedback turned out to be a handy and effective instrument for facilitating mental preparedness and togetherness of players to be in a state of readiness when facing a high-stress competitive season.

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