Boosting Football Excellence: The Impact Of Psychological Skill Training

Babar Kamil*, Akhtar Nawaz Ganjera

Department of Sport Sciences & Physical Education, Faculty of Allied Sciences, University of Lahore, Lahore, 54000, PAKISTAN.
*Corresponding Author: Babar Kamil, babarkamil@fccollege.edu.pk

Abstract:
This study explored the impact of Psychological Skills Training (PST) on the performance of football players, focusing on mental toughness, self-talk, imagery, perception of success, and motivation. The sample consisted of 32 midfield players aged 20-25, recruited from Forman Christian College, Lahore, using purposive sampling. None of the participants had prior knowledge of sport psychology or had undergone PST. Instruments included the Sports-related Mental Toughness Questionnaire (SMTQ), Automatic Self-Talk Questionnaire (ASTQ), Sport Imagery Ability Questionnaire (SIAQ), Perception of Success Questionnaire (PSQ), and Sport Motivation Scale (SMS). A three-day PST program was administered, comprising relaxation techniques, imagery exercises, and self-talk strategies tailored to the role of midfield players. The study employed a pre-test/post-test control group design, with data analyzed using paired sample t-tests and Wilcoxon signed-rank tests. Results indicated significant improvements in the experimental group across all psychological variables and performance metrics. The SMTQ, ASTQ, SIAQ, PSQ, and SMS scales demonstrated high reliability, with Cronbach's alpha values exceeding 0.89. Statistical analysis revealed substantial effect sizes for the experimental group, indicating the efficacy of the PST program in enhancing football performance, particularly in first touch, passing, and tackling percentages. The findings underscore the importance of psychological skills in sports performance and suggest that incorporating PST into regular training regimes can significantly enhance the mental and physical aspects of athletes' performances. The study highlights the potential of PST as a crucial component in sports training, warranting further exploration and application in different sports contexts.

Keywords: Psychological Skills Training (PST), Football, performance, Mental toughness Self-talk, Imagery, Motivation.

Introduction

Football, a sport that demands exceptional physical capabilities, also requires a high level of psychological resilience and mental acuity. As competition intensifies at all levels of the sport, the importance of psychological skills training (PST) in optimizing player performance has garnered significant attention. The ability to maintain focus, manage stress, and perform under pressure is as crucial as physical preparation for football players. Psychological skills such as progressive muscle relaxation (PMR), self-talk, and imagery have been identified as key components of PST that can significantly enhance performance.

Psychological skills training is a systematic approach designed to develop and enhance psychological skills that are essential for athletic performance. PST encompasses a variety of techniques that aim to improve an athlete's mental toughness, focus, and emotional control. As Hardy, Jones, and Gould (1996) suggest, the

psychological demands of sports often equal, if not exceed, the physical demands, making PST a critical component of athletic training programs. In football, where the pressure of competition is immense, the application of PST can help players manage anxiety, maintain concentration, and perform consistently at their highest level.

Progressive muscle relaxation (PMR) is one of the earliest and most widely used relaxation techniques in sports psychology. Developed by Jacobson (1938), PMR involves the systematic tensing and relaxing of muscle groups to reduce physical tension and psychological stress. The technique has been shown to be effective in managing anxiety and enhancing performance by promoting a state of relaxation that allows athletes to maintain composure during competition (Cohn & Rotella, 1995). In football, where players frequently face high-stress situations, the ability to quickly and effectively reduce tension can be crucial for optimal performance. Research by Maynard, Hemmings, and Warwick-Evans (1995) supports the efficacy of PMR in reducing pre-competition anxiety and improving performance, suggesting that football players who incorporate PMR into their training routines may be better equipped to handle the psychological demands of the sport.

Self-talk, defined as the internal dialogue that athletes use to regulate their thoughts, emotions, and behaviors, plays a pivotal role in sports performance. Hardy (2006) highlights that self-talk can influence an athlete's confidence, motivation, and focus, all of which are critical for success in competitive sports. The Automatic Self-Talk Questionnaire (ASTQ), developed by Zourbanos et al. (2009), measures the frequency and content of self-talk during sports performance, distinguishing between positive and negative self-talk. Positive self-talk has been associated with improved performance outcomes, as it enhances confidence, reduces anxiety, and maintains focus on task-relevant cues (Theodorakis et al., 2000). Conversely, negative self-talk can undermine performance by increasing anxiety and distracting athletes from their goals. In football, where mental sharpness is crucial, effective self-talk can help players maintain concentration and execute their skills under pressure. The inclusion of self-talk in PST allows football players to develop a more positive internal dialogue, which can translate into better performance on the field.

Imagery, or the mental visualization of specific skills, scenarios, or outcomes, is another essential component of PST that has been widely used in sports psychology. According to Morris, Spittle, and Watt (2005), imagery allows athletes to mentally rehearse their performance, thereby enhancing their confidence, focus, and execution of skills. The Sport Imagery Ability Questionnaire (SIAQ), developed by Williams and Cumming (2014), assesses an athlete's ability to use imagery effectively in sports settings. Research has consistently shown that athletes who frequently engage in imagery are better prepared for competition, as they have mentally rehearsed the challenges, they are likely to face (Cumming & Williams, 2013). In football, where players must quickly adapt to dynamic game situations, the ability to visualize successful outcomes can significantly enhance performance. Imagery can also be used to rehearse strategies, improve technical skills, and prepare for high-pressure scenarios, making it an invaluable tool in a football player's psychological toolkit.

The way athletes perceive success and failure has a profound impact on their motivation and performance. The Perception of Success Questionnaire (PSQ), developed by Roberts et al. (1998), measures athletes' perceptions of success and failure in sport contexts, distinguishing between task-oriented and ego-oriented success. Task-oriented athletes, who perceive success as a result of effort and mastery, are more likely to persist in the face of challenges and exhibit higher levels of intrinsic motivation. On the other hand, ego-oriented athletes, who define success relative

to others, may experience more anxiety and are more susceptible to performance fluctuations (Duda & Nicholls, 1992). Understanding these perceptions is crucial for tailoring PST interventions that enhance motivation and performance.

The Sport Motivation Scale (SMS), created by Pelletier et al. (1995), evaluates the various motivational factors that drive athletes' engagement in sports activities. Motivation is a key determinant of athletic performance, influencing not only the effort athletes put into training and competition but also their overall enjoyment and commitment to the sport. The SMS measures intrinsic motivation, extrinsic motivation, and amotivation, providing a comprehensive view of an athlete's motivational profile. Research by Vallerand and Rousseau (2001) suggests that athletes with high levels of intrinsic motivation are more likely to experience sustained engagement and improved performance. In football, where the demands of the sport can be physically and mentally exhausting, maintaining high levels of motivation is essential for long-term success. By incorporating PST techniques that enhance motivation, such as goal setting and positive reinforcement, football players can maintain their enthusiasm and commitment to the sport.

The integration of PST into football training programs offers a holistic approach to enhancing player performance. By developing psychological skills such as relaxation, positive self-talk, and imagery, football players can improve their mental toughness, focus, and emotional regulation. These skills not only enhance performance during competition but also contribute to overall well-being, reducing the risk of burnout and enhancing long-term athletic development (Weinberg & Gould, 2019).

The potential benefits of PST in football are supported by a growing body of research, which highlights the critical role of mental skills in achieving peak performance. As the demands of the sport continue to evolve, the importance of psychological preparation cannot be overstated. By equipping football players with the psychological tools needed to succeed, PST can play a pivotal role in enhancing performance and achieving success on the field.

Research Methodology

Sample: Purposive Sampling Technique was employed A total number of 32 football players within the age range of 20-25 were recruited from Forman Christian College (A Chartered University), Lahore, Pakistan.

Instruments: The Sports-related Mental Toughness Questionnaire (SMTQ), developed by Sheard, Golby, and van Wersch (2009), assesses the mental resilience and toughness of athletes in sports contexts. The Automatic Self-Talk Questionnaire (ASTQ), created by Zourbanos et al. (2009), measures the frequency and content of athletes' automatic self-talk during sports performance, providing insights into their internal dialogue. The Sport Imagery Ability Questionnaire (SIAQ), designed by Williams and Cumming (2014), evaluates an athlete's proficiency in utilizing mental imagery effectively within sports settings. The Perception of Success Questionnaire (PSQ), developed by Roberts et al. (1998), examines athletes' perceptions of success and failure in sports environments, highlighting their achievement orientations. Lastly, the Sport Motivation Scale (SMS), created by Pelletier et al. (1995), assesses various motivational factors that drive athletes' engagement and effort in sports activities, offering a comprehensive view of their intrinsic and extrinsic motivational sources.

Procedure: Only consented football players within the age range of 20-25 were inducted in the study. Non-consented football players outside the age range of 20-25 were excluded from the study. All participants were midfield players and

reported that they had played in a midfield position for the majority of their playing careers. The participants reported having no knowledge of sport psychology and none of them had previously undertaken a structured PST program. All participants volunteered for the study and signed informed consent forms prior to participating in the study. They were also informed that all data would remain anonymous and that confidentiality would be maintained at all times. The dependent variables were 1st touch percentage, pass percentage, and tackle percentage. Each of the dependent variables were defined as the number of 1st touches, passes, tackles, that were successful, divided by the total number attempted, and multiplied by 100. The performance subcomponents to be pivotal to the role of a midfield player and defined a successful 1st touch as where the ball is brought under control within one touch with no additional movements being required to shield the ball from an opponent, a successful pass as one that reaches its destination, and a successful tackle as one where you complete a legal tackle and gain possession of the ball. Psychological Skills Training Package including relaxation, imagery, and self-talk was delivered to each of the participants across a three-day period. Relaxation strategies were introduced in a three-stage approach. Finally, different elements of self-talk were introduced to the participants with examples of each type that may be of relevance to the midfielder within competition.

Statistical analysis: Data was analyzed using SPSS (23.0). Descriptive analysis was used to compute Means and SDs of different variables. Data of psychological skill training were compared and analyzed by using t-test to analyze the significance of the results. Regression analysis was done to see the effect of independent variables on the dependent variables.

Data Analysis and Results

Table 1 Reliability Assessment of Automatic Self-Talk Questionnaire, Sports Imagery Ability Questionnaire, Sports Mental Toughness Questionnaire, Perception of Success Questionnaire and Sport Motivation scale (n=32)

Scales	No. of Items	Cronbach's Alpha		
		Pre-test	Post-test	Overall
Automatic Self-Talk Questionnaire (ASTQ)	36	.765	.954	.921
Sport Imagery Ability Questionnaire (SIAQ)	15	.777	.876	.892
Sports Mental Toughness Questionnaire (SMTQ)	14	.757	.914	.907
Perception of Success Questionnaire (PSQ)	12	.861	.981	.911
Sport Motivation Scale (SMS)	28	.648	.937	.904

Note. Table 1 displays the reliability assessments of the Automatic Self-Talk Questionnaire, Sports Imagery Ability Questionnaire, Sports Mental Toughness Questionnaire, Perception of Success Questionnaire, and Sport Motivation Scale before and after testing. The Cronbach's alpha values for the automatic Self-Talk Questionnaire, Sport Imagery Ability Questionnaire, Sports Mental Toughness Questionnaire, Perception of Success Questionnaire, and Sport Motivation Scale are 0.921, 0.892, 0.907, 0.911, and 0.904, respectively. The Cronbach's Alpha ratings for all the scales exceed 0.892, indicating exceptional reliability of the data.

Table 2 Normality of Data for Automatic Self-Talk Questionnaire, Sport Imagery Ability Questionnaire, Sports Mental Toughness Questionnaire, Perception of Success Questionnaire, and Sport Motivation Scale (n=32)

Scales	Shapiro-Wilk		
	Statistic	df	p
Automatic Self-Talk Questionnaire (ASTQ)	.976	32	.665
Sport Imagery Ability Questionnaire (SIAQ)	.981	32	.834
Sports Mental Toughness Questionnaire (SMTQ)	.927	32	.032
Perception of Success Questionnaire (PSQ)	.883	32	.002
Sport Motivation Scale (SMS)	.929	32	.036
Sports Performance (SP)	.962	32	.320

Note. The following table displays the outcome of a Shapiro-Wilk test assessing the normality of the data. It provides a concise overview of the outcomes for six factors. The "Statistic" column displays the test statistic for each variable, while the "p" column indicates the p-value of the test. A little p-value (often less than .05) suggests that the variable deviates from a normal distribution, whereas a big p-value suggests that it adheres to a normal distribution. For the Automatic Self-Talk Questionnaire (ASTQ) the value is 0.665, Sports Imagery Ability Questionnaire (SIAQ) the value is 0.834, Sports Performance (SP) the value is 0.320, the p-values are larger than 0.05, meaning that these variables likely follow a normal distribution. For the variables Sports Mental Toughness Questionnaire (SMTQ) the value is 0.032, Perception of Success Questionnaire (PSQ) the value is 0.002, Sport Motivation Scale (SMS) the value is 0.036, and the p-values are less than 0.05, meaning that these variables likely do not follow a normal distribution. The "df" column shows the degrees of freedom associated with each test.

Table 3 Statistics of Paired Sample T-test of Automatic Self-Talk Questionnaire of the Participants of both Control and Experimental Groups (n=16 + n=16) before and after intervention

| Group	Pre-test		Post-test					
	M	SD	M	SD	t(15)	p	r	Cohen's d
Control	2.37	.22	2.42	.29	-1.809	.091	.95	.19
Experimental	2.43	.35	3.42	.20	-9.057	<0.001	-.164	3.4

Note. A paired samples t-test was used to compare the pre-test and post-test scores of both the control and experimental groups. The average pre-test score for the control group was 2.37 with a standard deviation of 0.22, whereas the average post-test score was 2.42 with a standard deviation of 0.29. The t-test indicated that there was no statistically significant difference between the pre-test and post-test scores for the control group, with a t-value of -1.809, degrees of freedom (df) of 15, p-value of 0.091, and effect size (r) of 0.95. The magnitude of the effect size, as measured by Cohen's d, was minimal with a value of 0.19. The experimental group had a mean pre-test score of 2.43 with a standard deviation of 0.35, and a mean post-test score of 3.42 with a standard deviation of 0.20. The t-test indicated a statistically significant disparity between the pre-test and post-test scores for the experimental group, with a t-value of -9.057, p-value less than 0.001, and an effect size (r) of -0.164. The magnitude of the effect size, as measured by Cohen's d, was substantial, with a value of 3.4. Hence, the findings suggest that although there

was no noteworthy alteration in scores for the control group, there was a notable rise in scores for the experimental group from the initial assessment to the final assessment, with a substantial impact.

Figure 1 Error bar chart showing the difference between the Automatic Self-Talk Questionnaire of the Participants of both the Control and Experimental Groups.
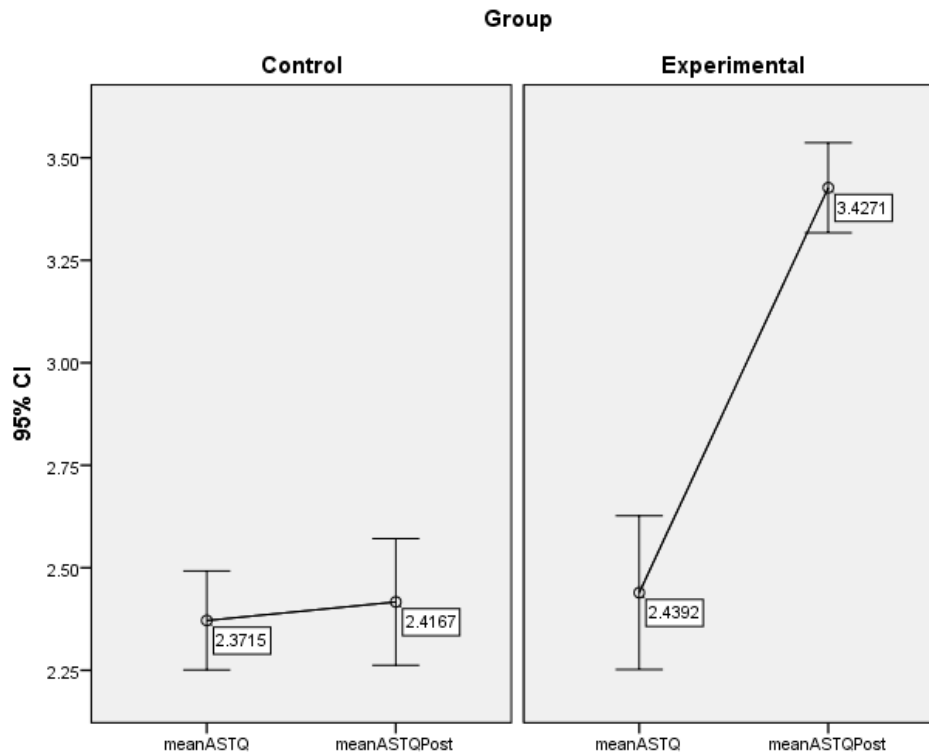
Note. As shown in Figure 6, participants in the Experimental Group experienced a greater difference compared to the control Group after intervention in Automatic Self-Talk Questionnaire.

Table 4 Statistics of Paired Sample T-test of Sports Imagery Ability Questionnaire of the Participants of both Control and Experimental Group (n=16 + n=16) before and after Intervention

|	Pre-test		Post-test					
Group	M	SD	M	SD	t(15)	p	r	Cohen's d
Control	1.98	.28	2.14	.33	-1.94	.071	.46	.52
Experimental	2.56	.39	2.86	.37	-2.44	.027	.20	.78

Note. A paired samples t-test was used to compare the pre-test and post-test scores of both the control and experimental groups. The average pre-test score for the control group was 1.98 with a standard deviation of 0.28, whereas the average post-test score was 2.14 with a standard deviation of 0.33. The t-test indicated that there was no statistically significant difference between the pre-test and post-test scores for the control group. The t-value was -1.94, with 15 degrees of freedom, resulting in a p-value of 0.071. The effect size, as measured by the correlation

coefficient r, was 0.46. The magnitude of the effect size, as measured by Cohen's d, was moderate, with a value of 0.52. The experimental group had a mean pre-test score of 2.56 (standard deviation = 0.39) and a mean post-test score of 2.86 (standard deviation = 0.37). The t-test indicated a statistically significant disparity between the pre-test and post-test scores for the experimental group, with a t-value of -2.44 (df = 15, p = 0.027, r = 0.20). The magnitude of the

effect size, as measured by Cohen's d, was substantial, with a value of 0.78. Hence, the findings suggest a noteworthy rise in scores for the experimental group between the pre-test and post-test, accompanied by a substantial effect size. However, in the control group, while the difference did not reach statistical significance, there was a moderate effect size indicating a possible practical importance.

Figure 2 Error bar chart showing the difference between the Sports Imagery Ability Questionnaire of the Participants of both the Control and Experimental Groups.
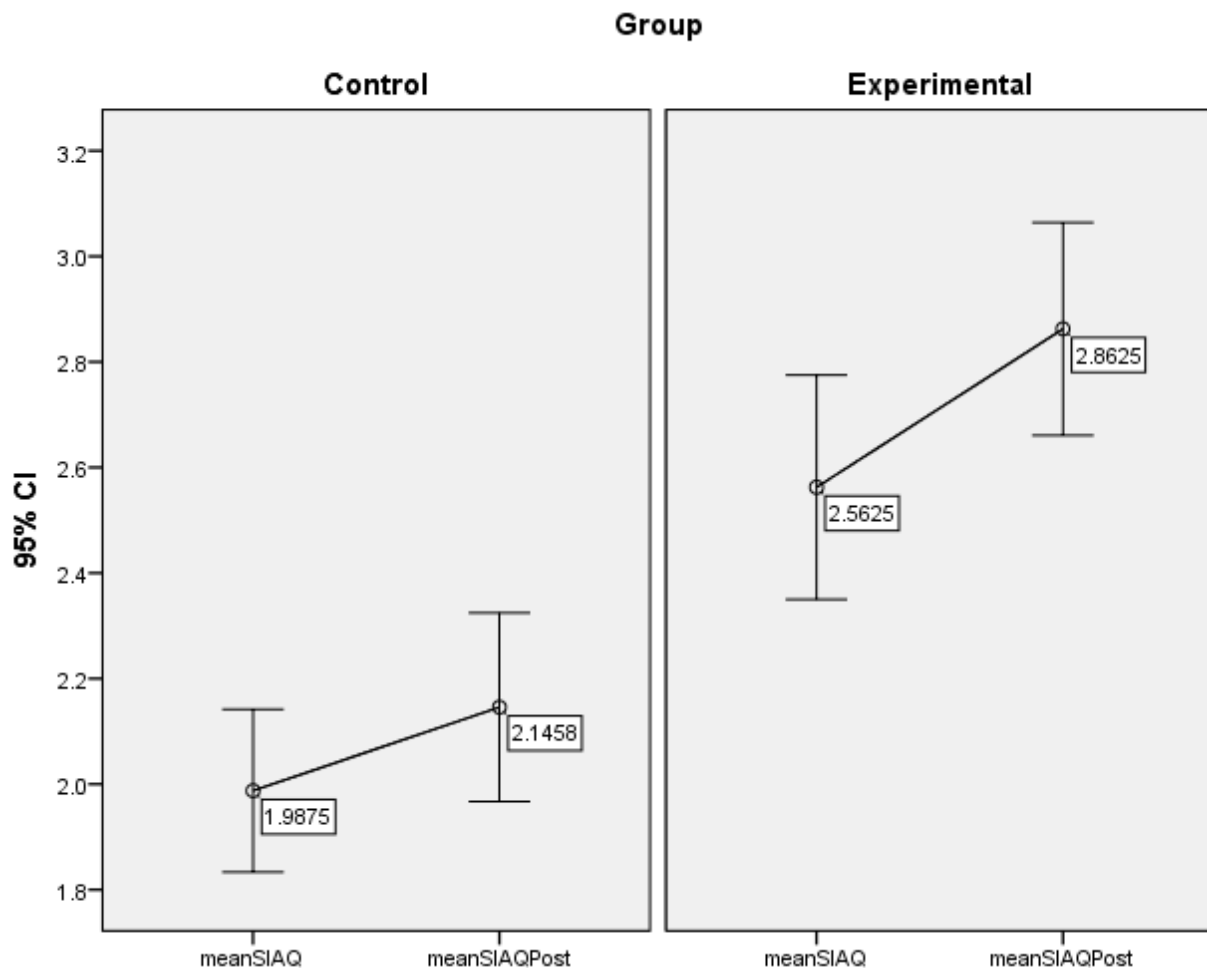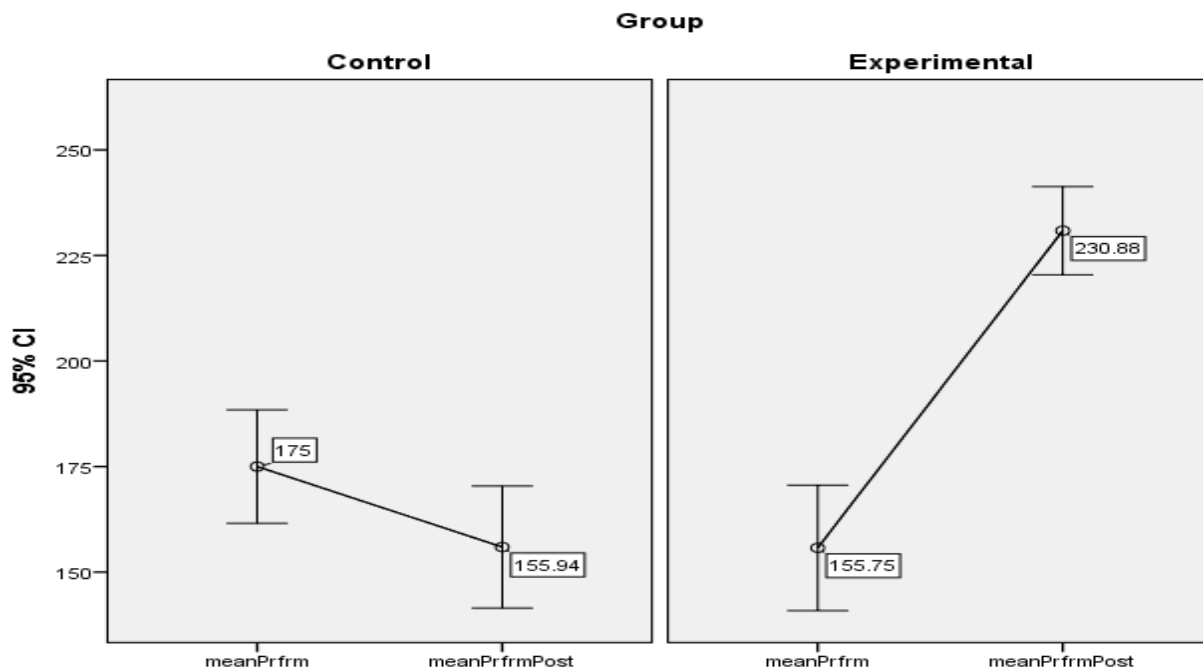

Note. As shown in Figure 7, participants in the Experimental Group experienced a greater difference compared to the control Group after intervention in Sports Imagery Ability Questionnaire.

Table 5 Statistics of Paired Sample T-test of Sports Performance for the Participants of both Control and Experimental Groups (n=16 + n=16) before and after Intervention

Group	Pre-test M	SD	Post-test M	SD	t(15)	p	r	Cohen's d
Control	175	25.21	156	27.09	1.918	.078	-.155	-.726
Experimental	155.7	27.87	230.8	19.59	-10.66	<0.001	.336	3.11

Note. A paired samples t-test was used to compare the pre-test and post-test scores of both the control and experimental groups. The control group had a mean pre-test score of 175 with a standard deviation of 25.21, and a mean post-test score of 156 with a standard deviation of 27.09. The t-test indicated that there was no statistically significant difference between the pre-test and post-test scores for the control group, with a t-value of 1.918 and a p-value of 0.078. The correlation coefficient (r) was -0.155, showing a weak negative association. The effect size, as measured by Cohen's d, was -0.726, which indicates a modest effect size. The experimental group had a mean pre-test score of 155.7 (standard deviation = 27.87) and a mean post-test score of 230.8 (standard deviation = 19.59). The t-test indicated a substantial disparity between the pre-test and post-test results for the experimental group, t(15) = -10.66, p < 0.001. The correlation coefficient (r) was 0.336, showing a moderate positive association. The effect size, as measured by Cohen's d, was 3.11, which indicates a substantial impact size. Hence, the findings suggest that although there was no noteworthy alteration in scores for the control group, there was a substantial rise in scores for the experimental group from the initial assessment to the final assessment, with a considerable impact.

Figure 3 Error bar chart showing the difference between the Sports Performance of the Participants of both the Control and Experimental Groups.

Note. As shown in Figure 8, participants in the Experimental Group experienced a greater difference compared to the control Group after intervention in Sports Performance.

Table 6 Statistics of Wilcoxon Signed Rank test of Sports Mental Toughness Questionnaire of the Participants of both Control and Experimental Group (n=16 + n=16) before and after intervention

Group	Pre-test		Post-test		Cohen's d
	M	SD	M	SD	
Control	2.41	.62	2.51	.71	.15
Experimental	2.46	.42	3.68	.21	3.67

Note. A Wilcoxon signed-rank test was performed to assess the differences in pre-test and

post-test scores between the control and experimental groups. The control group had a mean pre-test score of 2.41 with a standard deviation of 0.62, and a mean post-test score of 2.51 with a standard deviation of 0.71. The magnitude of the effect size, as measured by Cohen's d, was 0.15. The experimental group had a mean pre-test score of 2.46 with a standard deviation of 0.42, and a mean post-test score of 3.68 with a standard deviation of 0.21. The magnitude of the effect size, as measured by Cohen's d, was 3.67. Hence, the findings suggest that there was no notable disparity in the pre-test and post-test scores for the control group, accompanied with a little effect size. Nevertheless, the experimental group exhibited a noteworthy rise in scores from the pre-test to the post-test, accompanied by a substantial effect size.

Table 7 Test Statistics and Ranks of Wilcoxon Signed Rank test of Sports Mental Toughness Questionnaire of the Participants of both Control and Experimental Group (n=16 + n=16) before and after intervention

Group	Test	Ranks	N	Mean Rank	Sum of Ranks	Z	p
Control	PreTest- PostTest	Negative Ranks	3[a]	7.50	22.50	-2.151[d]	0.031
		Positive Ranks	12[b]	8.13	97.50		
		Ties	1[c]				
Experimental	PreTest- PostTest	Negative Ranks	0[a]	.00	.00	-3.52[d]	<.001
		Positive Ranks	16[b]	8.50	136.00		
		Ties	0[c]				

a=meanSMTQPost < meanSMTQ, b=meanSMTQPost > meanSMTQ, c=meanSMTQPost = meanSMTQ, d=Based on negative ranks.

Note. A Wilcoxon signed-rank test was performed to compare the pre-test and post-test results within both the control and experimental groups. The control group had 3 negative ranks, 12 positive ranks, and 1 tie. The cumulative total for negative ranks was 22.50, while the cumulative total for positive ranks was 97.50. The average rank for negative ranks was 7.50, while for positive ranks it was 8.13. The test statistic (Z) was -2.151, with a p-value of 0.031, showing a significant difference between pre-test and post-test scores for the control group. The

experimental group had zero negative ranks, 16 positive ranks, and zero ties. The total amount of positive ranks was 136.00. The average rank for positive ranks was 8.50. The test statistic (Z) was -3.52, with a p-value of less than 0.001, suggesting a highly statistically significant difference between the pre-test and post-test scores for the experimental group. Hence, the findings suggest that there was a statistically significant disparity in the scores between the pre-test and post-test for both the control and experimental groups.

Figure 4 Error bar chart showing the difference between the Sports Mental Toughness Questionnaire of the Participants of both the Control and Experimental Groups.
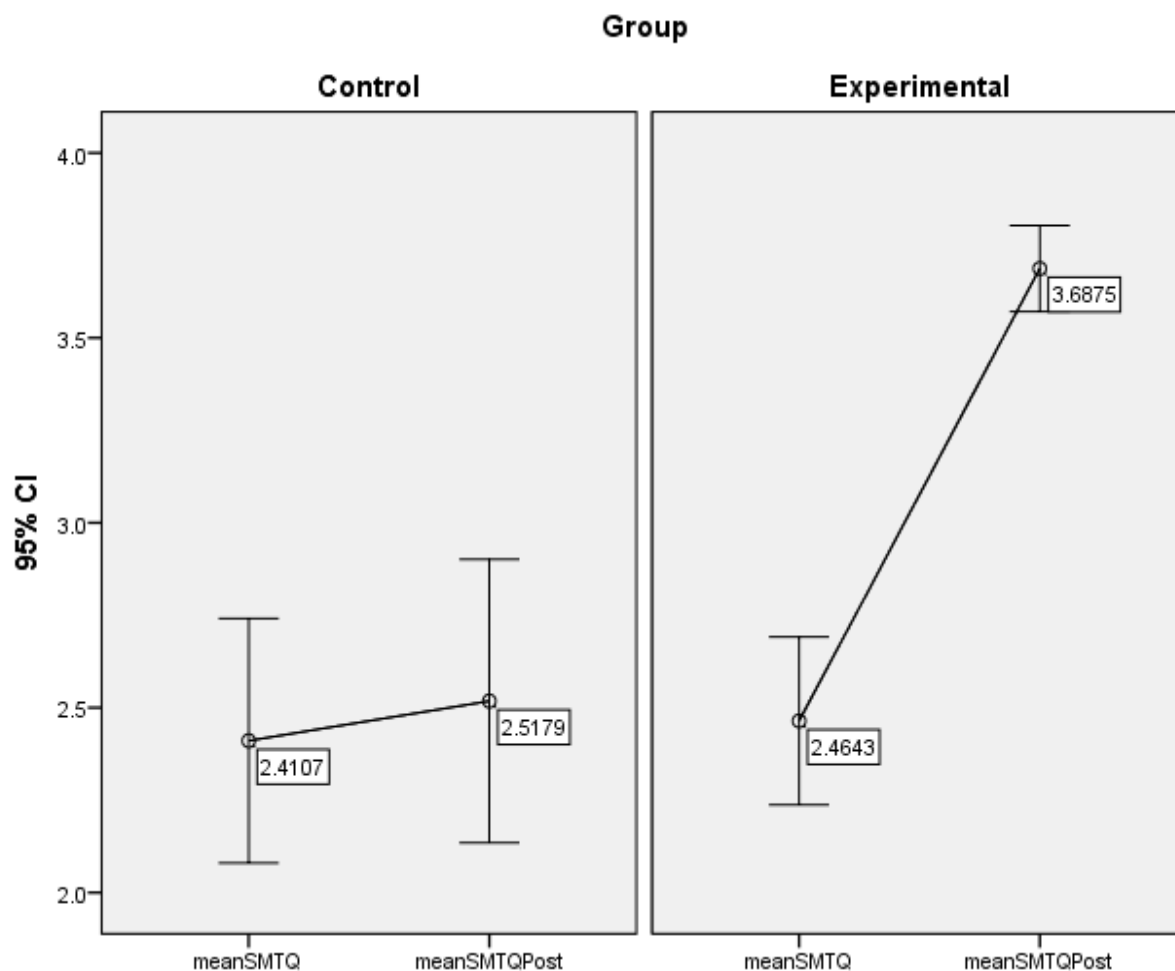
Note. As shown in Figure 9, participants in the Experimental Group experienced a greater difference compared to the control Group after intervention in Sports Mental Toughness Questionnaire.

Table 8 Statistics of Wilcoxon Signed Rank test of Perception of Success Questionnaire of the Participants of both Control and Experimental Group (n=16 + n=16) before and after intervention

	Pre-test		Post-test		
Group	M	SD	M	SD	Cohen's d
Control	2.25	.46	2.20	.40	-.116
Experimental	2.04	.40	4.32	.29	6.526

Note. A Wilcoxon signed-rank test was conducted to compare the pre-test and post-test scores within the control and experimental groups. For the control group, the mean pre-test score was 2.25 (SD = 0.46), and the mean post-test score was 2.20 (SD = 0.40). The effect size (Cohen's d) was -0.116. For the experimental group, the mean pre-test score was 2.04 (SD =

0.40), and the mean post-test score was 4.32 (SD = 0.29). The effect size (Cohen's d) was 6.526. Therefore, the results indicate that for the control group, there was a negligible difference between pre-test and post-test scores, while for the experimental group, there was a substantial increase in scores from pre-test to post-test, with a large effect size.

Table 9 Test Statistics and Ranks of Wilcoxon Signed Rank test of Perception of Success Questionnaire of the Participants of both Control and Experimental Group (n=16 + n=16) before and after intervention

Group	Test	Ranks	N	Mean Rank	Sum of Ranks	Z	p
Control	PreTest- PostTest	Negative Ranks	7[a]	7.76	55.00	-.673[d]	.501
		Positive Ranks	6[b]	6.00	36.00		
		Ties	3[c]				
Experimental	PreTest- PostTest	Negative Ranks	0[a]	.00	.00	-3.521[d]	<.001
		Positive Ranks	16[b]	8.50	136.00		
		Ties	0[c]				

a=meanPSQPost < meanPSQ, b=meanPSQPost > meanPSQ, c=meanPSQPost = meanPSQ, d=Based on negative ranks.

Note. A Wilcoxon signed-rank test was performed to compare the pre-test and post-test results within both the control and experimental groups. The control group had 7 negative ranks, 6 positive ranks, and 3 ties. The cumulative total of negative ranks was 55.00, while the cumulative total of positive ranks was 36.00. The average rank for negative ranks was 7.76, while for positive ranks it was 6.00. The test statistic (Z) was -0.673, with a p-value of 0.501, suggesting that there is no statistically significant difference between the pre-test and post-test scores for the control group. The experimental group had zero negative ranks, 16 positive ranks, and no ties. The total amount of positive ranks was 136.00. The average rank for positive ranks was 8.50. The test statistic (Z) was -3.521, with a p-value of less than 0.001, suggesting a highly statistically significant difference between the pre-test and post-test scores for the experimental group. Hence, the findings suggest that there was no statistically significant disparity in the pre-test and post-test scores for the control group. However, for the experimental group, there was a highly statistically significant discrepancy with a substantial effect size.

Figure 5 Error bar chart showing the difference between the Perception of Success Questionnaire of the Participants of both the Control and Experimental Groups.
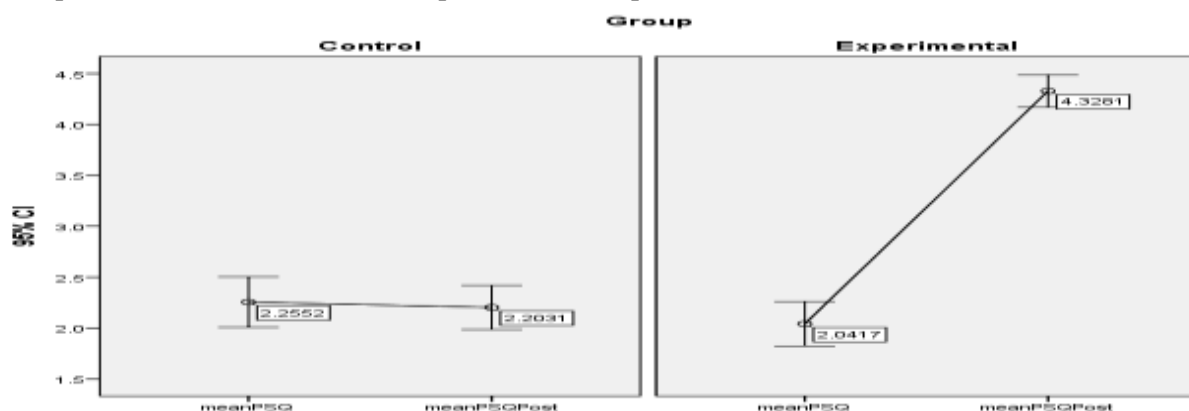
Note. As shown in Figure 10, participants in the Experimental Group experienced a greater difference compared to the control Group after intervention in Perception of Success Questionnaire.

Table 10 Statistics of Wilcoxon Signed Rank test of Sport Motivation Scale of the Participants of both Control and Experimental Group (n=16 + n=16) before and after intervention

Group	Pre-test		Post-test		
	M	SD	M	SD	Cohen's d
Control	2.23	.28	2.22	.28	-.036
Experimental	2.44	.26	3.18	.20	3.19

Note. A Wilcoxon signed-rank test was performed to compare the pre-test and post-test results within both the control and experimental groups. The control group had a mean pre-test score of 2.23 (SD = 0.28) and a mean post-test score of 2.22 (SD = 0.28). The magnitude of the effect size, as measured by Cohen's d, was -0.036. The experimental group had a mean pre-test score of 2.44 with a standard deviation of 0.26, and a mean post-test score of 3.18 with a standard deviation of 0.20. The magnitude of the effect size, as measured by Cohen's d, was 3.19. Hence, the findings suggest that the control group exhibited a little disparity in scores between the pre-test and post-test, but the experimental group demonstrated a significant improvement in scores from the pre-test to the post-test, with a notable effect size.

Table 11 Test Statistics and Ranks of Wilcoxon Signed Rank test of Sport Motivation Scale of the Participants of both Control and Experimental Group (n=16 + n=16) before and after intervention

Group	Test	Ranks	N	Mean Rank	Sum of Ranks	Z	p
Control	PreTest- PostTest	Negative Ranks	5[a]	11.20	56.00	-.221[d]	.825
		Positive Ranks	9[b]	5.44	49.00		
		Ties	2[c]				
Experimental	PreTest- PostTest	Negative Ranks	0[a]	.00	.00	-3.521[d]	<.001
		Positive Ranks	16[b]	8.50	136.00		
		Ties	0[c]				

a=meanSMSPost < meanSMS, b=meanSMSPost > meanSMS, c=meanSMSPost = meanSMS, d=Based on negative ranks.

Note. A Wilcoxon signed-rank test was performed to assess the differences between the pre-test and post-test scores in both the control and experimental groups. The control group consisted of 5 negative ranks, 9 positive ranks, and 2 ties. The cumulative sum of negative ranks was 56.00, while the cumulative amount of positive ranks was 49.00. The average rank for negative ranks was 11.20, while the average rank for positive ranks was 5.44. The test statistic (Z) was -0.221, with a p-value of 0.825, suggesting that there is no statistically significant difference between the pre-test and post-test scores for the control group. The experimental group had zero negative ranks, 16 positive ranks, and zero ties. The total amount of positive ranks was 136.00. The average rank for positive ranks was 8.50. The test statistic (Z) was -3.521, with a p-value of less than 0.001, suggesting a highly statistically significant difference between pre-test and post-test scores for the experimental group. Hence, the findings suggest that there was no statistically

significant disparity in the pre-test and post-test scores for the control group. However, for the experimental group, there was a very statistically significant distinction with a substantial effect size.

Figure 6 Error bar chart showing the difference between the Sport Motivation Scale of the Participants of both the Control and Experimental Groups.
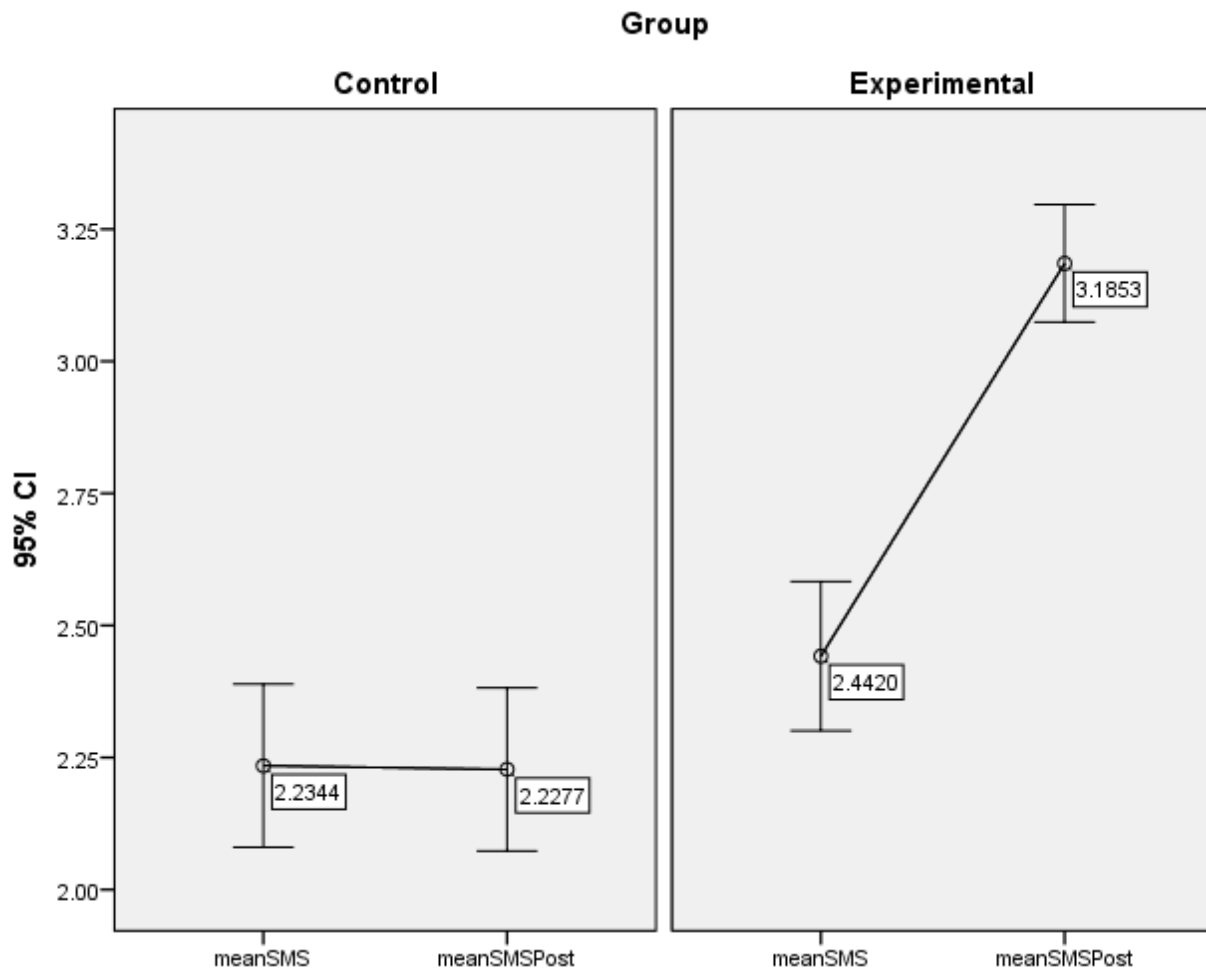
Note. As shown in Figure 11, participants in the Experimental Group experienced a greater difference compared to the control group after intervention in the Sport Motivation Scale.

Discussion

The research carried out an in-depth investigation of a number of significant components that are associated with psychological factors and performance metrics in the industry of sports with specific reference to football. The study employed an experimental design with two groups: an experimental group consisting of 16 participants and a control group also consisting of 16 participants. The study included repeated assessments before and after the intervention, as well as follow-up assessments. Additionally, multiple baseline evaluations were conducted within a week to measure the dependent variable, which included psychological skills and sub-components of football performance. In the initial week, the PST education phase provided

comprehensive information on Psychological Skills Training (PST). This was followed by the PST acquisition phase in the subsequent week, where participants in the experimental group were instructed in relaxation techniques, imagination, and self-talk to improve their performance.

In the first place, the reliability evaluation of a number of different measurement scales, such as the Automatic Self-Talk Questionnaire, the Sports Imagery Ability Questionnaire, the Sports Mental Toughness Questionnaire, the Perception of Success Questionnaire, and the Sport Motivation Scale, revealed consistently high Cronbach's alpha values, which indicated that the data that was collected was extremely reliable. On the other hand, further normality tests revealed that while certain variables most likely followed a normal distribution, others did not, indicating that there may be variances in the distribution of data among the many constructs that were assessed. (Barker et al., 2020; Birrer, 2010).

In this study, a comparison was made between the control group and the experimental group in order to investigate the influence of an intervention on a variety of psychological characteristics and performance metrics in football players. After the intervention, the scores of the experimental group on the Automatic Self-Talk Questionnaire showed a substantial rise, but the scores of the control group did not indicate any meaningful change. Similar trends were reported for the Sports Imagery Ability Questionnaire and Sports Performance, with the experimental group displaying considerable gains after the intervention, but the control group did not show any change at all. In addition, the Wilcoxon Signed Rank tests demonstrated that the experimental group experienced significant improvements in their scores on the Sports Mental Toughness Questionnaire, the Perception of Success Questionnaire, and the Sport Motivation Scale. This demonstrates that the

intervention was successful in improving these psychological factors. The results of correlation studies also revealed that there are favorable connections between psychological skill training, mental toughness, perceptions of success, sport motivation, and athletic performance (Thelwell et al.,2006). With the use of regression analysis, the significance of psychological skill training as a major predictor of mental toughness, perception of success, sport motivation, and sports performance among football players was further highlighted. In light of these findings, it is clear that psychological aspects play a crucial part in improving athletic performance, and they also highlight the effectiveness of tailored therapies in maximizing the outcomes for players (Edwards & Steyn, 2008)

Following the intervention, the experimental group exhibited significant improvements in a variety of psychological factors, including self-talk, imagery ability, mental toughness, perception of success, and motivation. These findings provide evidence that the intervention was successful in enhancing the psychological resilience and performance mindset of athletes. In line with the findings of earlier studies that shown the beneficial effects of psychological therapies on the mental abilities and performance outcomes of athletes (Hays et al., 2020), these findings are compatible with those findings. Furthermore, the positive relationships that exist between psychological skill training, mental toughness, perception of success, sport motivation, and sports performance provide insight on the interconnection of these constructs in the process of shaping the total performance and well-being of athletes (Gross et al., 2018; Sheard & Golby, 2006).

In conclusion, the findings of this research offer significant insights into the intricate relationship that exists between psychological elements and the athletic performance of football players

(Röthlin et al.,2020). This study offers practical implications for coaches, practitioners, and sports psychologists who are looking to maximize athlete development and performance outcomes. It does this by explaining the influence that tailored treatments have on a variety of psychological dimensions and performance measurements. Further investigation into the long-term impacts of psychological therapies, the investigation of possible moderators or mediators of intervention efficacy, and the examination of the generalizability of these findings to other sports contexts are all potential areas of focus for future study.

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