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COGNITIVE AND MOTIVATIONAL SPECIFIC IMAGERY AS A PROMISING INTERVENTION FOR BOOSTING TRAIT SPORTS CONFIDENCE AMONG VARSITY CRICKET ATHLETES

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ABSTRACT

In the South Asian regional context, Cricket has emerged as one of the most popular sports. Its popularity has reached to such an extent that nearly every other child is now selecting cricket as his future profession or primary sport. Despite this, no previous research has been undertaken on how varsity cricket players use imagery during matches. Hence, the main objective of this study was to investigate the relationship between cognitive and motivation-specific imagery and trait sports confidence among varsity cricket athletes. A total of 162 athletes (108 males and 54 females), aged between 18 and 25 years, completed the questionnaire. It comprised of three sections including demographic information, the Sport Imagery Questionnaire (SIQ), and the Trait Sports Confidence Inventory (TSCI). The results of a hierarchical regression study demonstrated that cognitive and motivational specific imagery were associated positively with trait sports confidence among varsity cricket players. Whereas, gender alone showed a lesser predictive influence on trait sports confidence among varsity cricketers. Additionally, the independent samples t-tests further demonstrated that male cricketers scored significantly higher than female cricketers across all imagery dimensions and trait sports confidence. In conclusion, the study showed that having a clear mental picture is very important for building confidence in cricket sports and stressed the need for organized mental skills programs. These would help female players improve their ability to visualize and help them perform better.

Key words: *sports imagery, trait sports confidence, cricketer and varsity athletes*

INTRODUCTION

In the South Asian regional context, Cricket has emerged as one of the most popular sports (Gupta, 2004). Its popularity has reached to such an extent that nearly every other child is now selecting cricket as his future profession or primary sport (Fletcher et al., 2014). This passion has been observed to reach its peak among youth who are enrolled in universities. It may be because universities provide a number of facilities including state-of-the-art equipment, highly qualified coaching staff and

ample time to practice their particular sport (Bullock et al., 2022). However, this strong commitment to excel in sports may add extra pressure upon the prospective students. They may be exposed to a notably high academic and athletic pressure to perform and excel in both domains which may ultimately lead them to continuous failures in almost every competition and exam (Jeevannavar et al., 2020). This consistent setback might substantially influence their psychological health which may lead to the loss of trait sports confidence.

Trait sports confidence is a significant psychological factor in competitive sports, particularly for varsity athletes who must balance their academic activities and high-level sports performance (Wang et al., 2022). In cricket, where success is totally dependent on accuracy, decision-making, and mental stability, trait sports confidence has turned out to be an important factor in maintaining consistent performance under pressure (Halilsoy, 2024). High trait sports confidence levels have been associated with multiple positive attributes such as improved resilience, lower anxiety and enhanced motivation among varsity athletes (Lee et al., 2023). On the other hand, its lower levels have also been associated to a number of detrimental outcomes including lack of consistent performance, reduced motivation levels and heightened performance anxiety (Budnik-Przybylska et al., 2022). However, empirical evidence extracted from the past literature has proposed high prevalence of low trait sports confidence among young athletes (Soulliard et al., 2019). Therefore, it has now become a need of the hour to address this pressing concern through any possible psychological intervention. Imagery, in this context, may turn out to be a particularly promising intervention to counter low trait sports confidence levels among varsity athletes.

Imagery, often known as mental visualization of abilities or techniques, is defined as a mental rehearsal or visualization of actions or performance scenarios (Lin et al., 2021). The importance of imagery in sports is generally established, but previous study has either focused on imagery as a whole or the influence of individual aspects in elite athletes (Walter et al., 2022). In this regard, a study by Wu et al. (2023) showed that mental imagery may be used a lot in elite sports to improve skills by imagining game situations. Another study on elite athletes found that using cognitive and motivation imagery techniques could boost their confidence and consistency (D'Agostino & Munroe-Chandler, 2025). Furthermore, mental imagery has been associated to decreased anxiety, increased emotional control, and successful goal planning, all of which could considerably boost an athlete's confidence and resilience (D'Agostino, 2023). Despite these findings, no previous research has been undertaken on how varsity cricket players use imagery during matches. This leaves a significant gap in the research regarding how varsity cricket players might mentally prepare themselves.

This gap highlights the need for targeted research to determine if various characteristics of imagery, notably cognitive and motivational, can improve trait sports confidence among varsity cricket athletes. As a result, the current study seeks to investigate the role of cognitive and motivational specific imagery as an intervention to increase trait sports confidence in varsity cricket athletes who undergo both athletic and academic challenges. By doing so, it aims to add not only to academic understanding of mental skills training in cricket, but also to provide practical implications for coaches, sport psychologists, and university athletic programs in supporting student athletes' psychological well-being and performance readiness.

Methodology

Study Design

The framework adopted to investigate the effects of cognitive and motivational specific imagery on trait sports confidence among varsity cricket players was cross-sectional.

Participants

One sixty-five varsity cricket athletes who fulfilled the criteria of competing at either a university or national or international level while being enrolled in a university were sampled as population for this study. They had a minimum age of 18 years and a maximum age of 25 years and were engaged from distinct universities in the Lahore City. Due to the strict eligibility criteria, the whole population was eventually considered as the sample of the study. Hence, the final sample consisted of 164 cricket players (108 male and 54 female, Age M = 21.80, 21.85 years, SD = 1.858, 1.406 respectively and playing experience M6.63, 6.39, SD 1.858, 1.406). Before the study, not a single participant had ever

undergone any kind of formal visualization instruction. This was a crucial factor in maintaining the research's validity since it ensured that their answers to imagery use and trait sports confidence represented their natural experiences rather of being influenced by specific training programs or prior exposure to imagery approaches.

Instruments

The tool was comprised of three components including a demographics section, an Imagery measuring instrument and a trait sports confidence measuring instrument.

Imagery Measuring Tool

To measure sports imagery among varsity cricket athletes, the SI questionnaire that was designed by Hall et al. (1998) was administered. Participants were asked to rate 30 items as part of the procedure. The higher scores in this tool indicated more frequent imagery use within the participant. Several past studies having varsity athletes as their prospective population have utilized this tool which strengthens its validity (Mills et al., 2000; Munroe et al., 1998). Additionally, it is also considered a reliable tool as a Cronbach alpha score ranging from .85 to .92 has been reported by several studies (Omar-Fauzee et al., 2009; Short et al., 2005). For this study, a Cronbach alpha score of .884 was reported.

The Trait Sports Confidence Inventory

The TSCI, developed by Vealey (1986), was employed to measure the trait sports confidence. It consisted of 13-items with higher scores demonstrating more habitual trait sports confidence. Furthermore, due to its utilization as a primary tool to measure trait sports confidence by several studies (Rather & Singh, 2017; Vealey, 1988) and a relatively good Cronbach alpha score of .81 to .92 (Abdullah et al., 2021; Fogarty et al., 2016), it was a highly valid and reliable choice in this context. Whereas, the Cronbach alpha value of this tool for this study was calculated to be .851.

Procedure

The head coaches of the university cricket teams were first contacted and provided with detailed information regarding the purpose and procedures of the study. Notified agreement was gained from every participant, with assurances that to participate in the study was totally their individual decision and they could step out of the study at any stage without being penalized. Following this, the players were briefed on the questionnaires and the data collection process. Each participant completed a demographic form to provide descriptive information such as age, gender, playing level, playing experience. In addition, they also completed the questionnaire in a group setting prior to their regular training sessions. All questionnaires were collected by the researcher, securely stored, and later entered into Microsoft Excel for classification and analysis. The questionnaires granted a direct comparison with baseline scores, allowing an assessment of the impact of imageries training on the trait sports confidence of varsity cricket athletes.

Data analysis

The statistical assessments were applied through SPSS version 22 to examine demographic information and inferential statistics. Before analysis, the normality of data was checked. A hierarchical regression analysis was run to examine the significance of sports imagery of varsity cricketers on their trait sports confidence. Based on gender, the differences between sports imagery and trait sports confidence were carried out using independent samples t-test. The meaningful point of results was below to .05.

Results

Table 1: Demographic features of varsity Cricketers

Variables	Frequency (f)	Percentage (%)
Gender		
Male	108	66.7
Female	54	33.3
Playing Level		

Intervarsity	94	58.0
National	66	40.7
International	2	1.2
Academic (year)		
1st (year)	28	17.3
2nd (year)	57	35.2
3rd (year)	50	30.9
4th (year)	27	16.7
Age	M=21.81	SD=1.839
Playing experience	M=6.55	SD=1.720

Table (1) showed the personal characteristics of varsity cricket athletes. The sample consisted of 162 players, with 108 males (66.7%) and 54 females (33.3%). Most of the participants competed at the intervarsity level, followed by the national level (40.7%), with only a small percentage (1.2%) having international experience. In terms of academic years, the majority of players (35.2%) were in their second and third years (30.9%), with fewer in their first (17.3%) and fourth years (16.7%). The players average age was 21.81 years (SD = 1.839), and their average playing experience was 6.55 years (SD = 1.720), indicated that the participants were young and moderately experienced athletes.

Table 2: ANOVA Table of Hierarchical regression analysis for varsity cricket athletes

Model		SS	df	MS	F	*P*
1	**Regression**	1868.160	1	1868.160	9.797	.002[b]
	Residual	30508.630	160	190.679		
	Total	32376.790	161			
2	**Regression**	9270.494	6	1545.082	10.365	.000[c]
	Residual	23106.296	155	149.073		
	Total	32376.790	161			

The ANOVA summary of Hierarchical regression analysis indicated that in Model 1, gender significantly predicted the trait sports confidence, ($F = 9.797$, $p = .002$), that explained a small but significant portion of the variance.

In Model 2, the inclusion of five types of sports imagery along with gender led to a significant improvement ($F = 10.365$, $p = .000$), accounting for a large portion of variance. Overall, imagery variables explained stronger variance of trait sports confidence compared to gender alone.

Table 3: Hierarchical regression analysis for sports imagery and trait sports confidence in varsity cricket athletes

Model	Variable	B	SE	β	t	*P*
1	Gender	-7.204	2.301	-.240	-3.130	.002
2	Gender	.156	2.353	.005	.066	.947

	Cognitive Specific	3.215	1.434	.206	2.242	.026
	Cognitive General	.654	1.361	.047	.480	.632
	Motivational Specific	2.840	1.284	.208	2.211	.028
	Motivational General-Arousal	1.168	1.343	.075	.869	.386
	Motivational General-Mastery	1.794	1.484	.128	1.209	.228

R^2 =.136 for model 1; R^2 =.302 for model 2

The hierarchical multiple regression was utilized to assess the predictive significance of gender and different kinds of sports imagery among varsity cricket athletes. Model 1, explained that gender was a significantly negative predictor with trait sports confidence (β = –.240, *p* = .002), that accounted 13% of the variation in trait sports confidence (R^2 = .136).

In Model 2, which included five types of sports imagery and gender, the explanatory power was increased to 30.2% (R^2 = .302). Cognitive specific imagery (β = .206, *p* = .026) and motivational specific imagery (β = .208, p = .028) were positively significant predictors with trait sports confidence. This indicated that those varsity cricket athletes having high score of cognitive specific and motivational specific imagery might have high level of trait sports confidence. While gender (p = .947) and remaining factors of sports imagery likewise, CG (*p* = .632), MG-A (*p* = .386) and MG-M imagery (*p* = .228) were not significantly significant predictors of trait sports confidence.

Table 4: Mean evaluation between varsity female and male cricketers

Variable	(Male)		(Female)				
	(M)	(SD)	(M)	(SD)	(T)	(P)	(Cohen's d)
Cognitive Specific	5.2	.79	4.6	.97	4.13	.000	.70
Cognitive General	5.2	.95	4.4	1.00	4.43	.000	.74
Motivational Specific	5.5	.89	4.5	.97	6.37	.000	1.07
Motivational General Arousal	4.8	.85	4.5	.98	2.18	.031	.36
Motivational General Mastery	5.5	.83	4.6	1.09	5.21	.000	1.18
Self-confidence	80.31	13.66	73.11	14.10	3.09	.003	.51

An independent sample t-test was performed to evaluate the imagery of sports and trait sports confidence. The results showed that male players scored significantly higher than female varsity cricket athletes in all dimensions. For cognitive specific imagery (CS), male varsity cricket athletes (M=5.27 and SD=.797) reported greater score than female counterparts (M=4.64 and SD=.979). A similar pattern was observed in cognitive general (CG) imagery where male varsity cricket athletes (M=5.21 and SD=.957) out performed female varsity cricket athletes (M=4.48 and SD=1.000). Males scored significantly higher in motivational specific (MS) imagery as well (M=5.53 and SD=.899) as compared with female counterparts (M=4.52 and SD=.972). Lastly, for motivational generalized-imagery (MG-M) and motivational generalized-arousal (MG-A) imagery, male varsity cricket athletes scored higher (M=5.51 and SD=.833) and (M=4.88 and SD=.857) than female varsity cricket athletes (M=4.63 and SD=1.093) and (M=4.54 and SD=.980) respectively.

Additionally, trait sports confidence followed a similar pattern, as male varsity cricket athletes (M=80.31 and SD=13.662) achieved higher scores than female varsity cricket athletes (M=73.11 and SD=14.100). Overall, these findings indicated that varsity male cricketers employ a broader range of

imagery strategies particularly those related to motivation, mastery and specific goals more effectively than female players. This indicated that female cricket players may benefit from structured mental imagery training programs that improved their visualization skills and trait sports confidence level.

Discussion

The main objective of this study was to investigate the relationship between cognitive and motivation-specific imagery and trait sports confidence among varsity cricket athletes. Limited research has previously investigated the impact of various types of sport imagery, particularly cognitive and motivational imagery, on trait sports confidence, making this a novel study. The results of a hierarchical regression study demonstrated that cognitive and motivational specific imagery were associated positively with trait sports confidence among varsity cricket players. Furthermore, an independent samples t-test revealed that male varsity cricket athletes had significantly higher mean scores than female varsity cricket athletes across all dimensions of sports imagery and trait sports confidence.

The findings of this study demonstrated that cognitive specific imagery and motivational specific imagery were all positively related to trait sports confidence among varsity cricket players. This further demonstrated that strong scores in CS and MS imagery were critical for improving trait sports confidence in this particular varsity athlete group. Previous research conducted on multiple population groupings showed similar results. Hidayat et al. (2023) showed that CS and MS images are positively related to trait sports confidence among collegiate players. Furthermore, Budnik-Przybylska et al. (2022) proposed that cognitive specific imagery could be a strong and substantial predictor of trait sports confidence in professional athletes. Furthermore, Larasati et al. (2025) demonstrated that CS and MS images have a favorable correlation with trait sports confidence in wounded players. Another review by Williams and Cumming (2016) discovered that MS imagery has a positive relationship with trait sports confidence in athletes from various sports kinds. Furthermore, Munroe-Chandler et al. (2012) discovered that cognitive specific and MS images are significantly and positively correlated with trait sports confidence among footballers. In contrast, a couple of previous investigations found an unfavorable or inconsequential connection between CS and MS imageries and trait sports confidence. Yalçın et al. (2022) found an unsubstantiated link between cognitive and motivational imagery and sports confidence in varsity athletes. Similarly, Fauzan et al. (2025) discovered that cognitive and motivational specific imageries had no significant effect on trait sports confidence in college student athletes.

Although to figure out the underlying mechanisms of this positive association between cognitive and motivational specific imagery and trait sports confidence among varsity cricket athletes was not the aim of this study. However, it can be put forward that because cricket is a highly cognitive, strategy-driven sport a where player's sense of control is strengthened and uncertainty is reduced by mentally practicing skills and decisions. Secondly, imagery helps varsity athletes feel more prepared and consistent because they are still honing advanced techniques and are under pressure to compete. In cricket, lengthy wait times can exacerbate anxiety; during these intervals, motivational imagery helps sustain concentration and optimism. Additionally, imagery increases players' confidence in their ability to perform by preparing them for high-pressure situations like death overs or challenging wickets. In general, imagery offers role clarity, emotional stability, and mental preparedness, all of which boost this population's trait sports confidence.

On the other hand, several factors may help to explain why male varsity cricketer athletes significantly higher score than female athletes among all types of sports imagery. First, men often receive more prolonged and intensive cricket training from their earlier age, that may naturally boost greater exposure to mental skill such as imagery, game planning and master-oriented thinking (Mohan et al., 2025). Male athletes also tended to participate in more competitive matches, which demand frequent use of imageries to prepare athletes for high-pressure situations. Additionally, social and cultural expectations may also encourage men to practice imagery (Burson, 2025). The high level of confidence typically found among male athletes can also enhance the effectiveness of imagery, as confidence strengthens the connection between visualization and actual performance of male athletes. Finally, the lack of systematic mental skills training programs for female athletes, may

mean they have fewer opportunities to practice and develop imagery skills (Blanco-Ariza et al., 2024). These characteristics likely contributed to the higher imagery scores observed in male cricket players, demonstrating the necessity for formal psychological skills training to help female athletes' growth through the Higher Education Commission.

Directions for Future Research

Upcoming studies would benefit from working with bigger and more varied participant groups to improve generalizability and evaluate if same patterns emerge across different competition levels or sports. Longitudinal or experimental research are recommended to determine whether structured imagery training programs improve female athletes' confidence and imaging skills over time. Coaches and sports psychologists should focus on using imagery-based treatments, especially for female players, to improve their cognitive and motivational specific imagery. Furthermore, investigating other psychological elements such as emotional control, social support, and motivation may provide a better understanding of what drives trait sports confidence among female varsity cricket players.

Conclusion

This study found that cognitive specific imagery and motivational specific imagery were important factors in trait sports confidence for varsity cricketer players. This shows how important mental imagery is for cricketers to improve their performance-related confidence. Overall, these findings highlight the need of targeted mental skills training while also revealing significant gender variations in the usage and influence of sport imagery, as well as trait sports confidence in their performances.

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