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EFFECT OF SPECIFIC SKILL TRAINING WITH AND WITHOUT SPORTS IMAGERY TRAINING ON PLAYING ABILITY AND COPING STRATEGIES AMONG COLLEGE MEN BASKETBALL PLAYERS

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ABSTRACT

Background: Competitive basketball demands not only technical proficiency but also superior playing ability and effective psychological coping strategies. Sports imagery training has been established as a valuable mental skills intervention that may augment both physical performance and psychological resilience. This study investigates the effect of specific skill training with and without sports imagery on playing ability and coping strategies among college men basketball players.

Objectives: To assess whether combining specific skill training with sports imagery training produces significantly greater improvements in overall playing ability, problem-focused coping, and emotion-focused coping compared to skill training alone and a control condition.

Methods: Sixty male college basketball players (aged 18–24 years) were randomly assigned to three equal groups: Group A – Specific Skill Training (n=20), Group B – Specific Skill Training with Sports Imagery Training (n=20), and Group C – Control (n=20). A 12-week intervention with five sessions per week was implemented. Playing ability was assessed using a standardised Basketball Playing Ability Scale. Coping strategies were measured using the Athletic Coping Skills Inventory-28 (ACSI-28) subscales. Data were analysed using one-way ANOVA and Scheffé post hoc test at $p<0.05$.

Results: Significant improvements were observed in playing ability, problem-focused coping, and emotion-focused coping for Groups A and B. Group B demonstrated

significantly superior gains across all three variables ($p<0.001$). Scheffé post hoc analysis confirmed significant pairwise differences between all group combinations. The Control Group showed no significant change.

Conclusion: Sports imagery training combined with specific skill training significantly enhances basketball playing ability and psychological coping strategies. These findings advocate for the systematic inclusion of structured imagery protocols within collegiate basketball training curricula.

KEYWORDS: Basketball, specific skill training, sports imagery, playing ability, coping strategies, problem-focused coping, emotion-focused coping, mental skills training.

1. INTRODUCTION

Athletic performance in basketball is determined not merely by physical and technical capacities but also by the athlete's ability to perform at optimal levels under the multifaceted demands of competitive play. Playing ability, a composite indicator encompassing game sense, positional effectiveness, decision-making, and execution quality reflects an athlete's holistic contribution to team performance (Hay, 1993). Concurrently, the psychological demands of competitive basketball necessitate effective coping strategies to manage stress, maintain focus, and sustain performance under adversity (Lazarus, 2000).

Coping in sport is broadly categorised into problem-focused coping, which involves active efforts to modify or manage the source of stress, and emotion-focused coping, which involves regulating emotional responses to stressors (Lazarus & Folkman, 1984). Athletes proficient in both dimensions are better equipped to sustain performance quality and maintain motivational resolve across extended competitions (Nicholls & Polman, 2007).

Sports imagery has emerged as a multifunctional mental skills intervention shown to enhance not only technical skill execution but also psychological constructs including self-confidence, attentional control, and stress appraisal (Weinberg, 2008). Cognitive-specific imagery has been found to enhance playing ability by strengthening anticipatory cognitive schemas, while motivational general-mastery imagery has been associated with improvements in coping efficacy (Martin, Moritz & Hall, 1999). The present study examines these relationships in a rigorous 12-week randomised controlled trial.

2. METHODS

2.1 Participants

Sixty college men basketball players (mean age: 18 to 24 years) were recruited from three collegiate institutions in Tamil Nadu, India. All participants had minimum one year of competitive experience and no prior formal imagery training. Written informed consent was obtained.

2.2 Research Design

A randomised controlled experimental design with pre-test/post-test structure was adopted. Participants were allocated to three equal groups:

- Group A – Specific Skill Training only (n = 20)
- Group B – Specific Skill Training with Sports Imagery Training (n = 20)
- Group C – Control Group (n = 20, regular physical education classes only)

2.3 Intervention Protocol

The 12-week, five-days-per-week intervention involved 60-minute structured basketball skill training sessions for Groups A and B. Group B additionally participated in 15-minute guided sports imagery sessions post-training, facilitated by a certified sport psychology practitioner. Imagery protocols incorporated cognitive-specific imagery (tactical decision-making, positional responsibilities) and motivational general-mastery imagery (confident, resilient performance). The Control Group continued regular physical education activities.

2.4 Outcome Measures

Playing ability was assessed using a standardised Basketball Playing Ability Rating Scale (scored 0–100) administered by trained evaluators during structured game situations. Coping strategies were measured using the Athletic Coping Skills Inventory-28 (ACSI-28; Smith et al., 1995), specifically the problem-focused and emotion-focused coping subscales. Higher scores indicate more effective coping.

2.5 Statistical Analysis

SPSS (Version 27.0) was used for all analyses. One-way ANOVA assessed between-group post-test differences, followed by Scheffé post hoc test for pairwise comparisons. Significance was set at $p<0.05$.

3. RESULTS

Table 1 presents pre-test and post-test descriptive statistics. Table 2 summarises ANOVA results, and Table 3 presents Scheffé post hoc comparisons. Figure 1 provides a consolidated graphical representation of pre-test vs post-test comparisons, post-test group differences, and ANOVA F-values across all three variables.

Table 1: Pre-test and Post-test Means for Playing Ability and Coping Strategies.

Variable	Group	Pre-Test Mean ± SD	Post-Test Mean ± SD	Mean Diff.	t-value	Sig.
Playing Ability Score	Skill Training (A)	52.40 ± 4.82	62.15 ± 4.44	9.75	11.24	0.001*
	Skill + Imagery (B)	51.85 ± 4.90	70.60 ± 4.10	18.75	20.88	0.001*
	Control (C)	52.10 ± 4.76	53.40 ± 4.80	1.30	1.42	NS
Problem-focused Coping	Skill Training (A)	28.30 ± 3.14	34.75 ± 2.88	6.45	10.62	0.001*
	Skill + Imagery (B)	28.10 ± 3.20	40.85 ± 2.64	12.75	22.14	0.001*
	Control (C)	28.45 ± 3.08	29.10 ± 3.12	0.65	1.08	NS
Emotion-focused Coping	Skill Training (A)	24.60 ± 2.98	30.20 ± 2.72	5.60	9.88	0.001*
	Skill + Imagery (B)	24.40 ± 3.04	36.45 ± 2.52	12.05	21.42	0.001*
	Control (C)	24.75 ± 2.92	25.30 ± 2.96	0.55	0.92	NS

**p < 0.05 (significant); NS = Not Significant*

Table 2: One-Way ANOVA Summary for Post-Test Playing Ability and Coping Strategies.

Variable	Source	SS	df	MS	F	p	Significance
Playing Ability	Between Groups	5224.60	2	2612.30	134.62	<0.001	Significant*
	Within Groups	1106.25	57	19.41			
	Total	6330.85	59				
Problem-focused Coping	Between Groups	1892.14	2	946.07	118.44	<0.001	Significant*

	Within Groups	455.40	57	7.99			
	Total	2347.54	59				
Emotion-focused Coping	Between Groups	1648.32	2	824.16	102.88	<0.001	Significant*
	Within Groups	456.68	57	8.01			
	Total	2105.00	59				

**Significant at $p < 0.05$*

Table 3: Scheffé Post Hoc Test for Pairwise Group Comparisons.

Variable	Comparison	Mean Diff.	p-value	Significance
Playing Ability	A vs B	8.45	0.001	Significant* (B > A)
	A vs C	8.75	<0.001	Significant* (A > C)
	B vs C	17.20	<0.001	Significant* (B > C)
Problem-focused Coping	A vs B	6.10	0.001	Significant* (B > A)
	A vs C	5.65	<0.001	Significant* (A > C)
	B vs C	11.75	<0.001	Significant* (B > C)
Emotion-focused Coping	A vs B	6.25	0.001	Significant* (B > A)
	A vs C	4.90	<0.001	Significant* (A > C)
	B vs C	11.15	<0.001	Significant* (B > C)

**Significant at $p < 0.05$; A = Skill Training; B = Skill + Imagery; C = Control*

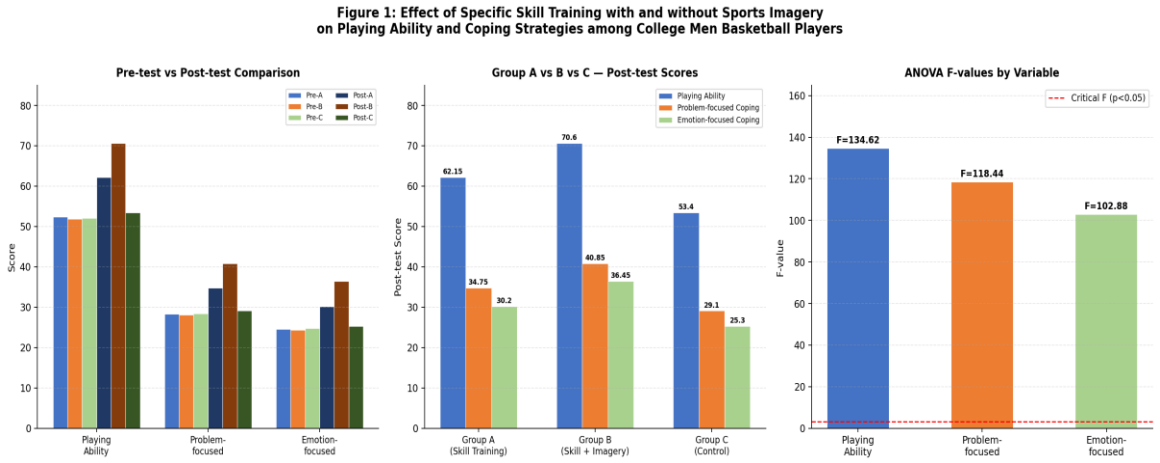

Figure 1: Effect of Specific Skill Training with and without Sports Imagery on Playing Ability and Coping Strategies.

ANOVA revealed highly significant between-group differences for playing ability ($F = 134.62$, $p<0.001$), problem-focused coping ($F = 118.44$, $p<0.001$), and emotion-focused coping ($F = 102.88$, $p<0.001$). As illustrated in Figure 1, Group B demonstrated the greatest pre-to-post improvements across all variables. Scheffé post hoc analysis confirmed significant pairwise differences between all group combinations. The Control Group exhibited negligible changes from pre-test to post-test.

4. DISCUSSION

The present findings provide robust evidence that integrating sports imagery training with specific skill training yields significantly greater improvements in playing ability and coping strategies compared to skill training alone or no intervention. The superiority of Group B across all three dependent variables supports the hypothesis that imagery training functions as a powerful psychological complement to physical practice in collegiate basketball.

The substantially higher post-test playing ability scores in Group B (70.60 vs. 62.15 for Group A) suggest that imagery training enhances the cognitive and tactical dimensions of game performance. This aligns with Cumming and Ramsey's (2009) contention that cognitive-specific imagery strengthens anticipatory decision-making schemas. The significant improvements in problem-focused coping for Group B (40.85 vs. 34.75) indicate that imagery training cultivates active, task-oriented responses to competitive stressors (Nicholls & Polman, 2007).

The superior emotion-focused coping scores in Group B (36.45 vs. 30.20) are consistent with research demonstrating that motivational general-mastery imagery enhances athletes' capacity to regulate emotional responses to competitive stress (Martin, Moritz & Hall, 1999). These findings corroborate Lazarus's (2000) transactional model of stress and coping and have clear practical implications for basketball coaching.

5. CONCLUSION

This study establishes that specific skill training combined with sports imagery training produces significantly superior improvements in playing ability, problem-focused coping, and emotion-focused coping among college men basketball players over a 12-week intervention. Group B outperformed both the skill-training-only and control groups across all outcome measures. These findings advocate for the systematic integration of structured imagery protocols within collegiate basketball training programmes.

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